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YPFS Lessons Learned Oral History Project: An Interview with Zeti Akhtar Aziz

Zeti Akhtar Aziz

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Lessons Learned Oral History Project Interview

Interviewee Name	Zeti Akhtar Aziz ¹
Crisis Position	Chief economist, then acting Governor, then Governor, Bank Negara Malaysia
Interviewer Name	Maryann Haggerty, Interviewer Yale Program on Financial Stability
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Introduction:

The Yale Program on Financial Stability reached out to Zeti Akhtar Aziz to request an interview about her experiences in financial crisis response in Malaysia.² Dr. Zeti, an economist, was governor of Bank Negara Malaysia, her nation's central bank, from 2000 to 2016, following time as acting governor and as deputy governor. In those positions, she was a key leader in Malaysia's response to the Asian financial crisis of 1997-98, as well as the financial sector restructuring that followed. At the time of the interview, she was co-chair of the board of governors of the Asia School of Business in Kuala Lumpur, which is a partnership between Bank Negara and the MIT Sloan School of Management.

This transcript of a Zoom interview has been edited for accuracy and clarity.

Transcript

YPFS: Today, we're going to focus on lessons you can share with other policy makers, especially those in younger generations, so that they can be prepared for other crises that may come over time. And so, throughout this discussion, I'll be asking you if you can pinpoint such lessons.

Let's start back in the 1990s. In mid-1997, the financial crisis that began in Thailand had spread throughout the region, including Malaysia. This was generally regarded as largely a currency crisis, at least at the beginning. If you can walk us through what you were doing for the bank then, what your role was before you became acting governor. We'll talk a little about the challenges facing your country's financial sector and its

¹ The opinions expressed during this interview are those of Dr. Zeti, and not those any of the institutions for which the interview subject is affiliated.

² A stylized summary of the key observations and insights gleaned from this interview with Dr. Zeti is available in the Yale Program on Financial Stability's *Journal of Financial Crises*.

economy and the responses of the bank. And then we'll get to some lessons. So, take us back to the 1990s.

Zeti: During that time, I was the chief economist, and I was also an assistant governor, which is the third level in the Bank covering the economic sector, monetary policy, reserve management and money market and foreign exchange operations. I was also given the role of the oversight of the foreign exchange administration. An important role in the dealing room was in managing liquidity in the domestic market, through money market operations, particularly during the early phase of the crisis. As in any financial crisis, it generally manifested itself in the financial markets—in the money market, where the liquidity tightened considerably, and then in the foreign exchange market, where the currency in this case was subject to extreme volatility.

The pressures on the currency actually started in May of '97. The volatile capital flows started around May when the Thai baht, the Thai currency, was targeted as the market had assessed it to be overvalued. There were therefore continuous speculative attacks on the currency, which was subsequently felt throughout the region, including in Malaysia.

As liquidity tightened, following the outflows, our role was to provide liquidity. The currency had also begun to depreciate in a discontinuous manner, meaning that there were abrupt changes in the trading range during that period of time. And so, intervention operations were also undertaken to stabilize the currency market.

But I would like to take a step back to the mid-1990s to the period in '95, '96—to set the background. The Malaysian economy at that time was overheating. We were growing by 9% to 10%, which was a very rapid growth, and credit growth which was financing this growth was also growing significantly by 20-30%. Additionally, the current account of the balance of payments was in deficit. A huge deficit, that grew over that period. By the mid-1990s, during the period '95, '96, it was about almost 10% of GDP. This was a massive current account deficit.

The argument made at that time was, that Malaysia was receiving a significant inflow of foreign direct investment during this period that covered this deficit. The economy was viewed very positively. It was therefore highlighted that this deficit was being financed by long term foreign direct investment and not short-term inflows.

But we did recognize at that time, that this was an area of vulnerability and that it posed a risk to our economy and to our financial system. Macroprudential measures were thus aggressively implemented—although we were not clever enough to call it that. But essentially that was what were implemented. It included placing limits on lending to the property sector and

the financing of activity in the stock market and so on. There were other limits that were imposed on the portfolio of the banking institutions aimed at reining in the excesses and risks to our financial system and to our economy.

An assessment was also made on the factors that accounted for the huge balance of payments current account deficit. This was mainly due to the investments in huge mega-projects that had high import content. This risk was highlighted to the government. It was largely due to the bunching, of these investments, all at the same time, that produced a very high level of imports that was not commensurate with the volume of exports, thereby resulting in the huge deficit.

YPFS: What kind of mega-projects were people thinking about?

Zeti: These were mainly infrastructure projects. They included the building of ports, railways, airports, highway projects, which were mainly initiated by government-linked corporations. It was therefore proposed to the government at that time, in 1995, that it was not necessary to stop these projects, but rather that the implementation of these projects needed to be staggered. We also highlighted the consequential risks to the economy and to the financial system if this risk continued. Reason did prevail. And so, these projects were indeed staggered. We had all the numbers to show the import content of these projects, and how it impacted the current account of the balance of payments. And as a result, just before the crisis, in 1996, the deficit halved to about 4.5% from about 9% of GDP and thus reduced our risk tremendously.

But the credit growth still continued to remain very high during that period, and into the period going into the crisis. The Thai baht had already begun to collapse in June, July, August of '97. Despite the instability experienced in the financial markets during this period, Malaysian economy however continued to grow. It only slowed down from about 9% to 7%.

So, in '97, we were still experiencing growth. It was only by December of '97 that our financial institutions started to experience financial stress. This financial stress followed the depreciation of the currency and the collapse of the stock market, which fell by about 50% at that time. This financial stress was reflected in their balance sheets.

YPFS: We're talking about a currency crisis here. How did currency fit in? You talked about macroprudential supervision, but were your institutions mostly in domestic currency or were there holdings in international currency?

Zeti: One of the things that was in Malaysia's favor, was that most of the financing of economic activity was in domestic currency. We had in place a requirement that all major foreign borrowing needed to meet a very important criteria.

Foreign borrowing was at the time attractive as the rates abroad were so much lower—the cost of foreign borrowing was so much lower. The approval for such borrowing was usually readily given but it had to be for purposes to finance foreign investment or business that generated foreign income. In other words, exporters had access to such borrowing because they had foreign income. This was a very clear requirement and had been in place for many years. And Malaysia therefore did not have high foreign debt levels. In other words, foreign borrowing to finance domestic activity, such as property development for example as was the case in our neighboring countries, was not permitted. Their domestic activities were extensively financed by foreign borrowing. In Malaysia, all those who borrowed foreign debt had foreign income. This later became an issue which we will discuss later regarding bringing Malaysia under an IMF program. However, because Malaysia could still meet all our foreign obligations we did not come under an IMF program.

Regarding our foreign indebtedness, this administrative ruling had also allowed us to have a very good database. When the currency started depreciating, we could immediately look into the database and detect where the stresses were—which corporations had high foreign debt, whether they could meet their foreign obligations, and indeed almost all of them could. And this was an issue that the IMF looked into. We were well positioned to provide them with all the data, showing them that these borrowings, which were not very significant to begin with and it was by borrowers who had foreign income.

So yes, during this period we did indeed experience the contagion on our currency in a discontinuous manner. It was adjustments felt wave after wave. One wave would take us to a new trading range and when it subsided it would remain in that new range for a while. And then, some other development would take us to the next trading range. In the meantime, our intervention operations were different from the strategies adopted by many other countries, where the effort was made to defend a certain level for the currency. For us, the strategy was different — it was just to achieve an adjustment that was more gradual, rather than experiencing abrupt and disruptive or discontinuous movements. This was in view of the fact that it was very unsettling for the businesses, the financial sector, and the public at large.

YPFS: **Before we get to the IMF, can you pinpoint or discuss lessons from this phase of the crisis?**

Zeti: The first lesson was the importance of determining and managing our areas of vulnerability. For us, it was our huge current account deficit, the rapid credit growth, and the rising domestic indebtedness. Policies were implemented during that time to address these issues and it produced results. So when we entered into the crisis, it was at a much stronger position than the two years earlier, where we would have been in a similar position as in Thailand that had

these risks during the time of the crisis. The next important lesson, relates to the nature of the crisis. This crisis started as a currency crisis. It is therefore important to understand the foreign exchange market, the dynamics of this market, that it is prone to discontinuous adjustments, that it is prone to over-adjustment and that it does not have self-equilibrating forces to return it to levels where it would reflect the underlying fundamentals of the economy.

In other words, during normal circumstances, when you are not in the crisis, the rates are expected to return to levels where it reflects the underlying economic fundamentals. During a crisis, however, it will tend to go further and further away from its equilibrium point. It is also important to understand the role of the major players in the market, including that of hedge funds—to understand how they take positions on currencies and so on. I personally spent a lot of time in the dealing room with the dealers, in particular at the ringgit desk. They engaged with the counterparties who would inform them that they had orders to sell off the currency at the various levels and at which rate. We could therefore see that they were dealing with hundreds of millions and therefore, we knew that the resources that they had far exceeded the resources that we had. We knew that we didn't have that kind of resources to defend our currency.

And therefore, the lesson here is to understand the dynamics of the market, the different behaviors of the various players in the market such as that of investors and those such as hedge funds which produce different kinds of movements in the market. Sometimes it would be futile, absolutely futile to defend a currency. You would in no time deplete your reserves. And that is what brought a number of the countries to eventually come under an IMF program.

Another important lesson is that interest rates cannot be relied upon to stabilize the currency unless it is a very massive adjustment. And this is something that nobody at the time seemed to understand. There were many high-level international bankers who would come to see the governor at that time. And I was invited to sit in all those meetings as a chief economist, and they would advise the governor, "You have to raise interest rates."

And then of course, the IMF came and they also told us, "You have to raise interest rates by 5 percentage points." Our argument was that this was unlikely to stabilize the currency and it would drive the economy down to the ground if interest rates were raised by 5%.

Their argument was to raise interest rates, temporarily, so as to stabilize the currency. But I had seen from personal experience, five years earlier, when I was based at our Bank's London office during the period '89 to '94 where we were a listening post and given USD500 million to manage, so that we would

pay attention to the developments in the market. This was the time when the hedge funds brought the pound sterling down in 1992.

If I'm not mistaken, interest rates were indeed raised twice by about 3 percentage points to stabilize the currency, but it failed to do so. And within days, that policy was reversed. This then affected the credibility of the policymakers to reverse that decision. Raising interest rates would not work, under those circumstances, when markets are irrational. That is, the market would not be responding to fundamentals but would be event-driven. Very large investors such as hedge funds would also be taking positions in the market. Raising interest rates unless by some abrupt massive amount would unlikely stabilize the market.

YPFS: We've sort of segued into talking about the role of the IMF and some of the others outside of Malaysia. Can we also talk a little about how those inside of your country reacted? You've started talking about that. Just get into what the IMF wanted you to do, which is raise interest rates, and how your bank and government and people took this idea.

Zeti: The IMF not only wanted us to raise interest rates by 5 percentage points but they also told us to allow the exchange rate to actually adjust, because they said Malaysia had a relatively strong economy, and so, the exchange rate would adjust right back to where it would reflect the underlying fundamentals. Of course, our own assessment was that the market was irrational at that point in time. In our assessment there was no self-equilibrating force that would bring the exchange rate back to reflect our underlying fundamentals. The market was thin with very few large trades that resulted in discontinuous sharp movements in the currency.

And not only that, the IMF also put pressure on us to pursue fiscal consolidation. At that time, the fiscal deficit was also quite large and they felt that we should strengthen our overall position and improve our fundamentals. During that time, we kept in close touch with our Thai counterparts, and we saw the implications of being put under an IMF program. It was thought that the very announcement of the role of the IMF in managing the crisis in Thailand, would have a positive announcement effect and would automatically bring about stability, because it would build confidence in the economy and the financial system.

But as we had learned from the experience of a few months earlier that we cannot rely on announcement effects, because the market tended to be event-driven. Such events could be totally unrelated, to Thailand or even to the Malaysian economy but that would result on a change in the trading range of our currency arising from "contagion effects." One important lesson from this experience relates to risk management. There needs to be a national risk management framework to manage the risks of your overall country, not just

of your institution or of the central bank itself, but there should be a national risk management framework to identify and assess the risks confronting our financial system and our economy.

I'm also a person that has been described as being paranoid in the sense that I would always expect the worst to happen. And indeed, I think that is important. And later I did read in one of the books written by Jim Collins on Leadership by Choice, he did discuss about one of the attributes that leaders should have is what he called productive paranoia. Well, I most certainly thought that the worst was yet to happen. And this is something that the IMF always thought otherwise. They always thought that in Thailand things would get better. Their very presence would improve the circumstances. I have been known to have mentioned that when you see the light at the end of the tunnel, what you are actually seeing is the light of an oncoming train. So it is important to anticipate that the worst is yet to happen. It puts you in a better state of preparedness.

Of course, when Malaysia did not adopt the IMF prescriptions, this was even before the controls were implemented, there was widespread condemnation. This was mainly for not raising rates. The IMF made interventions at various international meetings, and issued press statements that Malaysia failed to raise interest rates and that this was causing their currency to depreciate and so on. The condemnation by the IMF and the international community was indeed very overwhelming for us. There was not much we could do but to present our case. But it wasn't listened to much. We nevertheless continued to pursue our own policies that we assessed to be in the best interest of our country. So that was our focus; we had very specific goals to achieve. They were three-fold: to restore stability in our financial markets, to repair our financial system, and to bring about an economic recovery.

Thus, we had three very specific objectives for our policies. There was therefore also an important role for communications. Since we didn't succeed in getting acceptance from the international community, we focused on our domestic community. And this was important because although Malaysia, did have some domestic capital outflows, there was no large-scale domestic capital flight. The role of communications is a very important lesson. Information was provided on a daily basis to the financial industry, to the businesses, and to the public at large about our policies, the rationale for these policies and our assessment of the impact of these policies.

Our focus was therefore on our domestic economy and to keep every segment of the population informed on every aspect of our policies in great detail. In addition, it was on what to expect and anticipate and as to why we were implementing the various policies, how the measures were being implemented and what results could be expected. So that was how we managed the communications.

YPFS: And you're still in the pre-controls period here. Right?

Zeti: Yes. And so we are coming to that now. In August of 1998 the governor and the deputy governor handed in their resignation overnight. The Economic Council, chaired by the Prime Minister, which met every day, made a decision that I would be appointed as the acting governor, in effect, to be the governor. And at that point in time, I would describe Malaysia was about to breach its tipping point. By this time, the currency had depreciated by about 32%. This was about a year after the currency crisis had erupted. During this period, the currency had experienced wave after wave of depreciation. The stock market had also collapsed by about 70%. Then, in early 1998, stress on the financial institutions had set in. In anticipation that the worst was yet to come, the Bank proposed to the Economic Council on the need to establish an asset management corporation to manage the toxic assets on the balance sheets of the banking institutions.

The Economic Council which met daily approved the proposal. An important lesson from this is that this Council was able to coordinate every part of government in the management of the crisis. This proposal made by the central bank was for the formation of an asset management corporation to purchase the toxic assets from the banking sector. It was approved and the bill for its formation was then presented in parliament. The Government machinery had responded very promptly. The proposal was made in May of '98 and by early August of '98, this corporation was established. It purchased the loans that had gone bad and took them off the balance sheets of the commercial banks. They were valued by professional valuers and were generally in the range of 40 to 60% of the value of the assets. In other words, the banks absorbed the losses on these loans. They received 40% to 60% of the value of the loans.

Resulting from this, certain financial institutions required recapitalization. As they suffered losses from the sale of these toxic assets, some required to be recapitalized. A second vehicle was therefore created at the same time. It was a vehicle to recapitalize the banks. It is important to note that when the recapitalization happened, board members and senior management of the institutions were removed.

To give some perspective, just prior to my appointment as acting governor, the ringgit had traded in the range of RM3.30 to about RM3.80 to the US dollar. It had tended to stabilize in that range. Had it remained there, we would've been able to manage the situation of having a currency that had depreciated by about 30%. We could have lived with it at that level.

However, in July of '98, the Russian ruble collapsed. And while we don't have much economic linkages with Russia, the contagion on our currency was very significant. That development caused our currency to move to a significantly

depreciated trading range. It moved from RM3.60 to RM4.20 to the US dollar. By then, of course, Malaysia also was the only country in the region that had not had a currency collapse and thereby required to be brought under an IMF program. Rating agencies at that time had brought us down by two notches to just above investment grade. In fact, the leader of the team of the rating agency that had come out to do the assessment on us, had informed me that Malaysia's fundamentals were still very good, and we should expect to have your rating adjusted down by one notch down given the prevailing circumstances. But when he took the assessment back to his head office, the committee decided that it should be brought down by two notches. So when he called me on another matter, he actually didn't know that I had not received the announcement. The announcement had been sent to the ministry of finance." He informed to me, that the team had recommended that Malaysia's ratings be brought down by one notch. But that the committee after a very lengthy discussion decided that it would be brought down by two notches to be just above investment grade." Well, of course we were shocked and of course with that announcement, the currency moved down further.

In the following weeks, there was a lot of rhetoric and the market had mentioned, "see you at five," meaning that the ringgit will likely to go from RM4.20 to RM5.

Coming now to the controls. The idea of implementing controls was actually discussed much earlier. The thinking behind it didn't just happen in a short period of time. The Economic Council had discussed the idea of implementing controls several months earlier after the first quarter of 1998. It had been proposed that wide ranging controls on many aspects of the functioning of the financial system and the economy be implemented. Many members of the Council had expressed reservations. In fact, one of the members of the Economic Council wrote a paper with 33 reasons why such controls should not be implemented— because it would lead to devastation of the economy and the financial system.

The discussion had continued and no decision had been made. But when we reached this point of RM4.20 and seeing the risks of what could happen if indeed the ringgit breached five, the assessment was that it could plunge to meaningless levels. The discussion on the implementation of controls was then reactivated. We had seen what happened in Indonesia. Indonesia also started off with their currency at 2,500 rupiah against the U.S. dollar and then, wave after wave of depreciation, it reached 5,000 rupiah. When it breached this threshold level, suddenly there was a discontinuous movement to 17,000. It was a meaningless level. The market was so thin, there was hardly any trading. Small trades would lead to significant shifts in the rates. This brought the currency to a meaningless level. And so in our assessment we were approaching this threshold level. At this point, I wish to mention that the

foreign exchange rate for an economy like Malaysia is a very, important price, and probably more important than most of the other countries in the region.

YPFS: Why?

Zeti: The reason is because at that time we were an export-driven economy — an export-led economy. Our growth depended on our exports. And foreign direct investment was also very important as well. For more than 100 years, since the period when we were colonized, foreign investment came from Europe, from Britain and even from the United States. When people used to ask me, "Why is your country able to attract so much foreign investment?" I had only one answer. It was because we generated high returns for their investments, which they were able to remit back. They could remit back all their foreign earnings back to their home country. Our volume of exports plus imports, was relatively more significant than most countries. While the export volume was significant, we were also a major importer as well. And that's why we had a balance of payments current account deficit. Export plus imports was 100% of GDP. This means that our total trade of exports and imports was equivalent to the size of our economy. And then foreign direct investment was also significant. So the external price of our currency was a very important price for the functioning of our economy to facilitate our cross border trade and investment activities.

So after taking all this into consideration, a small committee was formed by the Economic Council to look into seriously implementing the currency controls. So it was a consideration that was very much debated and studied. The deputy governor was appointed head of this committee. It was a committee that I had actually formed earlier to look at how we could develop our foreign exchange market. Because we were such an important trading country, the central bank felt that we should have a well-developed onshore foreign exchange market, which we did not have at that time. Our currency was mainly traded in offshore markets. And therefore we had this committee, which was also made up of dealers from the private sector, to recommend to us how we would develop our foreign exchange market. This committee, excluding the private sector dealers, was then handed over to Economic Council and the deputy governor. It was a high-powered group, with the mandate to make the assessment as to whether and how to implement the foreign exchange controls.

But in the intervening period, the tensions increased immensely. It's unbelievable how the tensions heightened significantly. People were being pulled in different directions as to of what kind of policies should be implemented, and how to resolve this situation. People from the private sector, people from political parties and so on, all had different views on how to manage this crisis. By the 27th August, I believe that was the date that the governor and the deputy governor decided to resign. For the deputy governor,

his contract had actually finished and was about to be renewed. He just decided that he would not renew it. It was at that time that I was called by the prime minister. During the meeting I informed him that I didn't have expertise on controls, but he said that I knew how the economy functioned and how the financial system worked. He then added that we were in uncharted territory and that we should all work together with the Economic Council members in implementing the control measures.

When I looked at the control measures, it was a long list of controls to be implemented. And here is an important lesson. It was originally thought that we needed to prevent capital outflows happening, by not only the speculators who were taking positions on our currencies, but also by businesses and the public-at-large who were taking their monies out. It seems there was evidence that certain businesses and individuals were taking out amounts such as 10 million or even 100 million. But in my own assessment it was only the speculators that had to be addressed since they were dealing with hundreds of millions. And that it was not necessary to implement the other wide spread control measures that had been proposed.

So when I mentioned this, some responded, "Good luck to you," because they didn't think that the leadership would agree for the implementation of just a minor subset of the proposed measures. The anger had risen to a very high level and that it was very likely that the lists of controls that had been proposed would be implemented in its entirety. Several meetings with the leadership followed. It was arranged by the Chief Executive of the Economic Council, who was a former minister of finance, and myself, during which these measures were discussed at length. It was agreed that, yes, indeed, there were people taking out monies but this was in the hundreds of millions, but the speculators were dealing with billions. Our proposal was that if we contained the speculative activities, our currency would stabilize.

Well, in the end, reason did prevail. And it was agreed that this was what we needed to do. We could do this by non-internationalizing our currency and it would immediately rein in the speculators. The international community at the time also didn't understand how the speculators were financing their speculative activities. They were borrowing our currency from offshore sources at quite a high costs, then they would use these funds to sell the currency down, thereby generating a significant return which would finance their high cost of the borrowing of the currency.

We were aware of this, because prior to the controls, Malaysian depositors, were depositing their monies at these offshore centers and earning something like 12%, two or three times higher returns on their deposits compared to that which they would earn onshore. These ringgit deposits placed offshore had no currency risk, because it was in ringgit while earning such high returns. These deposits were then borrowed by the speculators. So when we saw these

offshore rates for deposits rise, we knew there was an oncoming attack on our currency. Thus, by non-internationalizing our currency, at the stroke of a pen, we prohibited transactions in our domestic currency in offshore centers. So this immediately restored stability in our domestic foreign exchange market. But in our discussions, we noted the risks of implementing this in a middle of a crisis. It was therefore proposed that we should have a 12-month minimum holding period to facilitate its implementation.

This was therefore the second control. The first control was to non-internationalize our currency. And the second control was to have a 12-month minimum holding period. If your currency was in the country, then it would have to stay there for 12 months. Of course, the world was very taken aback by these measures—of the non-internationalization of our currency, which they labelled as a currency control. There was immediate condemnation.

But two other countries in the region that had this non-internationalization of their currency, but which was not implemented during a crisis, were able to protect their currency. That is, their currency could only be traded onshore during their trading hours, during which it could be freely traded. And because they had this so-called controls, which was not implemented during any crisis and which they had in place for many years, then did not receive much attention. But when we implemented it at the height, the peak of the crisis, it drew massive attention and condemnation. And on top of it, to have a 12-month minimum holding period, they said, "You have trapped our monies in your country." As a chief economist and spokesperson, they were reassured that in 12 months, they could take their monies out." They did not believe that we would do this. They said, you have lost our trust. We don't believe you that in 12 months we will be able to take our monies out."

This was how it evolved. From our side, we proposed that just the one measure of the non-internationalization of our currency was necessary and when the risks were highlighted, we agreed that there should be a temporary 12-month period of time when the monies had to remain in the country. The prime minister had earlier told me that he would announce these measures to the public at large. And when we had discussed this the day before, he said that he would appear on television at four o'clock in the afternoon. I informed the leadership that this kind of announcement had to be made either before the market opened for business or after the market had closed. You cannot make such an announcement while the market is functioning. So it was thereby proposed that it be announced before the market opened. He then turned to me and said, "Well, then you should make the announcement in the morning." While he would make the nationwide address as planned that afternoon. There was then another risk. We had to hold our breath for a whole day because the announcement was to be made on a Tuesday, and Monday was our independence day and was therefore a public holiday only in Malaysia. All the other financial centers around the world, including in our region, were all

functioning that Monday. If they had known that this measure was going to be implemented there would have been a massive sell-off of our currency. Fortunately, everyone who worked for it — it started with a core team but the team grew significantly larger in the run up of the announcement because there were many sectors that had to be involved in this implementation. Everyone remained loyal to the cause. Everyone so much wanted to bring about stability, and everyone so much wanted for the economy to stabilize and recover.

So the title of the announcement that was on my press statement announcing this was "Malaysia: Gaining Monetary Independence," because it was just one day after our independence day. And indeed it did give us independence to implement all the other policies including to set interest rates according to our economic and financial conditions. A few days earlier, as the chief economist, I had also announced that the economy for the second quarter of 1998 had contracted by an unprecedented 7%. So from an overheating economy, a year later we suffered a sharp economic contraction by 7%. And so we needed to lower our interest rates.

Having the controls in place, it allowed us to immediately lower interest rates by 3 percentage points. And it allowed us to effectively implement the other policy measures that were introduced, including the asset management corporation and the recapitalization process as well as other measures to support growth. Everything functioned well in the next six months, and going into the following year. In 1999 we registered a 6% growth. So essentially it was a V-shaped recovery. The other economies in the region also recovered. That is the Thailand, Indonesia, and Korea, who were under IMF program also recovered.

And I recall that Paul Krugman came to speak in Malaysia during that time, probably in the year 2000, mentioned that Malaysia never needed to implement controls because the other countries in the region that didn't do so, also recovered. The conference was, attended by about 500 people. He said, "Malaysia should never have implemented controls because all the other countries in the region recovered just like you did without having to implement such unconventional measures." At the time I was deputy governor and I was sitting in the audience. Normally we do not make public comments, at such Forums, but I couldn't resist it. I raised my hand and said, "Professor Krugman, you are absolutely right. We did recover at about the same time that the other countries in the region did, but there was one very significant difference."

And I said, "Malaysia recovered at the lowest cost in the history of financial crises. The cost of the crisis was something like less than 5% of GDP. That includes the fiscal cost, the cost to labor dislocation, and other costs." It was very low compared to the cost that generations are still paying for in Korea, in

Thailand, and in Indonesia. For them it was somewhere between 30 to 40% of GDP. So I said, "Surely this mattered.

The measure we implemented can be described as a circuit breaker. It allowed stability to prevail and it restored the functioning of the financial markets. It thereby allowed the economy to operate and it also allowed all our other measures to be effective. When I am asked whether the controls were critical? I responded that they were only critical in providing the conditions for the other policies to be effective. It allowed the other policies to work. It was similar to a circuit breaker, and circuit breakers are not foreign tool that has been known to have been used. And in the case of the 12-month minimum holding period, it was lifted after 12 months. To the rating agencies and fund managers who came regularly to meet us, I would mention that when your monies were "so called" trapped in our country during those 12 months, the stock market index rose from its lows of 260 to increase to 800. In other words, the investments had increased in value during the time that it was "trapped" in our country.

The other important significant development was that in 1999, was our planned bond issuance to go directly to the market to tell our story. I was assigned, together with the secretary-general of the Treasury, to take the US leg of the roadshow. And a minister took the other leg from Asia to Europe and to the U.K. We then all met in New York. For the US segment, we had 26 meetings in more than 10 cities from coast to coast of the US to tell our story. But just before we were about to issue, Greenspan announced the bias towards tightening in 1999. And then there was some developments in Argentina that also affected the financial markets.

We knew that a few potential issuers had aborted their transactions. We then held discussion in New York with the minister as to whether we should abort the issuance. Our advice was to proceed because we had told our story and the reception by the market was very positive. If we didn't make the issuance we would lose this positive momentum. The decision was to scale back the issuance to one billion instead of the planned two billion. The aim was to get a pricing within our target range, and if we were oversubscribed, it would demonstrate confidence in our economy despite of having our ratings been brought down by two notches. And indeed that was what happened in 1999 just after we got out of the crisis. The issuance had a very positive closing rate and it was three and a half times oversubscribed. So we felt validated for the policies that we had implemented. We not only delivered to our country, but also to the international community who had invested in us.

YPFS: **Now, as we look at lessons from that very dramatic period, can you think of lessons that future policy makers could take? Was this a uniquely Malaysian situation? What can others learn from your rather dramatic and nonconventional experience?**

Zeti:

The main lessons learned is that policies need to be very specific to the desired outcomes we want to deliver. It gives clarity on the purpose for the policy measures. Secondly, there cannot be an over-reliance on any one policy. The solution has to involve a comprehensive set of policies. And thirdly, the policies have to be anticipatory. It cannot be implemented after the shock or when problems have occurred, that is in reaction. It has to be anticipatory. Therefore detection of the on-coming of the crisis is very important. Equally important is to recognize the next phase of the crisis and thereby taking the necessary measures to manage it. You need to be anticipatory.

In the management of a crisis, you also cannot over-rely on any one policy. It has to be a comprehensive approach with an optimal policy mix. And each respective policy should have a specific objective. And once the objective is achieved, there should be an exit, that's another important the lesson. Very often, when these unconventional measures are introduced during extreme conditions, it becomes difficult to exit from them in an orderly manner. And time and time and again in various crises, such unconventional measures are seen as being very critical to avert extreme conditions such as the plunging of the economy or the financial markets into the abyss. And yet after stability is restored, that policy remains in place for an extended period of time. And as time evolves, it becomes harder and harder to exit from these policies. So these are some of the broad lessons. And whether controls is unique to the Malaysia situation, I would say that it is a lesson on the principle. More specifically, sometimes a circuit breaker is needed. In any country, sometimes you need to provide a pause to allow other policies to work. And getting that pause is usually very difficult in a highly dynamic and complex environment.

But I should mention that I was informed—although I cannot verify this, that there was another country in another part of the world which it was thought should implement such a measure. And after very extensive assessment, it was thought that it didn't have the institutional capability to implement such controls in a very systematic and effective manner. It was said that Malaysia had that in place. It was very fortunate for Malaysia at the time. It was true we had a team of high-powered and experienced individuals who knew their business and who were loyal to the end of the world, to the central bank, and to their country. It was with such a team that much could be achieved. Very often you are pulled in different directions by different people having different agendas, it then becomes very difficult to come together. This then has to be reinforced by the entire machinery of the Government.

You also have to have strong leadership, unwavering, and with an interest to understand very well what is going on and what it means to do different things and so on. Malaysia had all this. You therefore need to have all these ingredients if you want to implement unconventional measures such as this. But of course, now the IMF refers to such measures as 'capital flow management' rather than 'capital controls' and there have been other

countries that have now implemented such policies, without drawing any negative attention as we did.

YPFS: Let's move forward and at least touch on the 2001 Financial Sector Master Plan, and at least touch on Malaysia's role in the global financial crisis.

Zeti: The financial sector master plan was a 10-year master plan that had three objectives. As I have mentioned earlier, always having clarity of objectives is very important. Our objectives were to develop a financial system that would best serve our domestic economy, throughout its cycles. Secondly, for the financial system to function efficiently. In other words, so that it would be competitive. And thirdly, to build its resilience in an international financial system and world economy that was increasingly more globalized. So the three objectives were to support our domestic economy, to function efficiently so that we are competitive, and thirdly, to build our resilience to future shocks. The master plan had 119 recommendations, and unbelievably almost every one of them was implemented over the next ten years.

And it did significantly strengthen our financial system. It started with the strengthening of the banking sector. We saw that we had a very fragmented banking system. There were something like 70-plus banking institutions, and some of them were very small and could not achieve scale for investments in new technologies, investments in risk management systems, investments in the talent that was necessary. It was therefore not only important to repair the banking system following the crisis, but to also rationalize and consolidate them. The industry was rationalized, meaning that the finance companies whose business was hire-purchase were merged with the commercial banks. Then the security houses and discount houses were also merged with the merchant banks to become investment banks. This resulted in fewer banking institutions. From 70-plus it was reduced to about 30. They now became larger and were better capitalized.

Then financial reforms, which was part of the financial master plan were then introduced. One of the reforms was to move to greater market orientation. With this reform, when the policy rate was changed, it would now translate into changes in all the other rates throughout the financial system. As a result of this transition to greater market orientation, we did indeed achieve that. We also removed all the market impediments and the rules and restrictions that led to market segmentation. This then facilitated the rates to adjust freely and reflect the market conditions of supply and demand.

Then we also proceeded to establish the Deposit Insurance Corporation. And this was an important move. Not only then did it instill greater confidence, with the deposits now insured up to a certain limit, but the Deposit Insurance Corporation also became the resolution authority. We took all of the positive

elements of our asset management corporation and the special purpose vehicle to recapitalize the banks that had performed well during the crisis, and embedded it into the legislation of the Deposit Insurance Corporation so that we would have such a resolution authority in place for future crises.

There were also the non-bank financial institutions—the so called shadow banks, that conducted banking businesses, but that were not regulated in a similar manner to the banking institutions. These included the development financial institutions such as the agriculture bank, the savings bank, and so on; as well as the cooperatives, in particular, the credit cooperatives and banking cooperatives. There was therefore not a level playing field. One part of our master plan was to strengthen the overall regulatory and supervisory regime. As this did not apply to these non-banks, a Development Financial Institutions Commission was established to provide oversight over these development financial institutions, to ensure that they remained sound and that were well managed. For the credit cooperatives, a Cooperative Commission was established with the same financial stability objectives. Two separate legislations were enacted by parliament to establish these Commissions.

This was followed by the establishment of the Financial Stability Executive Committee that had representation of the heads of these agencies in addition to the other financial regulators, that included the Securities Commission. This Executive Committee was chaired by the governor, and it could introduce financial stability policy measures. If for example macroprudential measures were introduced to rein in lending to the property sector, these measures could be extended to also apply to the non-bank sector as well. This Executive Committee could introduce such measures on these so-called non-banks. It led to a levelling of the playing field in terms of the prudential regulations that were applied to the banking sector.

Over the ten years following the crisis, we also strengthened the legislation that included the enactment of several major pieces of legislation for the financial sector. It was ten pieces of legislation during the time that I was governor. Of course, I would like to believe that the most important one was the Central Banking Act 2009. We rewrote it to be relevant in this new environment and to give us the necessary powers needed to achieve financial stability, while at the same time incorporating the checks and balances so that there could never be any abuse of these powers by the Bank. These legislations were followed by the Financial Services Act, where we consolidated all the legislation for the financial services sector into one main legislation. That was in 2013.

All these legislations did indeed give us more powers. There was therefore tremendous resistance to the enactment of these legislations. It was said that it made the bank too powerful, but our response was that it also included the checks and balances, the increase in the level of transparency and disclosure

by the Bank, and the accountability, which cumulatively would prevent any potential abuse of these powers. These elements were all embedded into the legislation so that it did not allow us in any way to abuse our greater powers. The governance structure was also significantly strengthened for governing the financial sector and for the Bank itself.

And finally, one of the most important lessons concerns the development of our financial sector. This is particularly important to emerging economies. The first relates to the development of the domestic bond market. It not only supports the domestic economy in the potential for financing longer term investments but it also diversifies the risk of over concentration of financing demands on the banking system. It also disperses the shock of volatile capital flows throughout the financial system. And second it relates to the transition to a flexible exchange regime. After the Asian Financial Crisis we had a fixed exchange rate regime. Then, in 2005, we moved to a flexible exchange rate regime to allow for a more efficient adjustment to the changes in the economic and financial conditions. However, very important to this reform was to have all the preconditions in place for the efficient functioning of the foreign exchange market. Therefore in the master plan, it highlights what the preconditions that need to be in place prior to embarking to liberalize the financial system and in this case to have a flexible exchange rate regime.

Relating to the development of the bond market; prior to the crisis and by the year 2000, the financing of long-term projects and large investments were all done through the banking sector. In our view there was an over-concentration of risk on the banking sector. We therefore needed to diversify the structure of the financial system and allow the financing of these kind of investments and projects to be undertaken by the bond market. A series of initiatives were then taken to develop the bond market.

So by the time when the 10 years of the plan was up, the bond market was 100% of GDP from about 30% in the year 2000. The measures included establishing institutions such as introducing a second rating agency and the Credit Guarantee Corporation. And then the government was advised to have a regular bond issuance along the entire term structure of interest rates—right up to 30 years,—therefore creating a benchmark yield curve—to have in place a reference rate in the bond market.

Then, through supporting innovation, many types of instruments were issued. Malaysia became one of three countries in the Asia-Pacific region that had a bond market where 50% of the domestic bond market made up of corporate bond issuance. The other two countries were Hong Kong and Australia. When the crisis of 2008, 2009 happened, the amplitude of the adjustments in our financial markets were much less. This was attributed to the fact that the effect of these volatile capital flows was disbursed throughout the financial system. We also developed the insurance sector—which was initially less developed.

They then became an important institutional player in the domestic bond market.

In addition, there was also the pension fund, other asset management corporations and investment corporations that were important institutional players that provided stability to our domestic bond market. The BIS actually wrote in one of their reports highlighting that 40% of the participants in our domestic bond market were foreign (non-residents), and that in the event of capital outflows it represented a major risk to in the domestic bond market. In our assessment this would not happen not only because these papers were much sought after but because we had our own institutional players that would step in the event that such a sell-off happened. This turned out to be correct. Our yields moved much less compared to in other countries, because our own domestic institutional players stepped in to purchase these papers. So the development of the domestic bond market turned out to be a vital part of the building of our resilience. It represents one of the most important lessons in the building of financial resilience, to have a diversified financial system.

And second, is of course the transition to a flexible exchange rate regime which is also very important. If the exchange rate is not allowed to adjust, then other prices will adjust and this can have damaging effects to the economy. But in order for the foreign exchange market to function effectively, there are a series of preconditions that needs to be in place for it to function efficiently. Finally, I wish to add that the role of communications and the arrangement for it, is very critical and is another important lesson. It is pivotal to the effective functioning of the financial system and for the effectiveness of policies. The rationale for the policies, the impact it would have and the nature of the policies need to be clearly understood. Explaining what and why it was being implemented is a vital part of the process.

And the final lesson is about having the organizational capability, and in this case I am referring to the central bank having the institutional competence and the organizational capability. For this, I would like to say, that this was the motivation for transforming our central bank that was undertaken in three phases to increase our institutional capability over a period of the 10 years of this master plan.

YPFS: **Is there anything else that you would like to add about the remainder of your tenure at the bank or lessons that you wish you had known or would like to pass on, or that you've seen in action either in the Global Financial Crisis or in the response to the Covid crisis? Anything you would like to add, again because I do know your time is rare.**

Zeti: When the Great Financial Crisis happened, we had in place—based on the series of reforms, institutional building and the development of the domestic

financial markets—not just in Malaysia, but in the other countries around us as well, resulted in significant payoffs. The banking institutions were better capitalized and stronger and the regulatory and supervisory regime had been strengthened significantly. Our banks were also stress tested against extreme assumptions. Our surveillance system had also improved significantly. For example, we now knew in near real time on the nature of the capital flows. In addition, as part of our efforts to pursue regional financial integration in the East Asian region, the surveillance was extended region wide. We also shared information. There was a regional technical committee that assessed regional developments. We shared information on developments in the region and the assessment of the risks confronting the region. So we could better detect if there was an imminent instability that was going to occur.

Another very important lesson relates to also managing the borrowers in the financial system. So far it had been about dealing with the lenders, and the resolution of their circumstances. Equally important, is the attention that needs to be given to the borrowers. For the large borrowers, we had a Corporate Debt Restructuring Committee that undertook the debt restructuring of stressed borrowers that involved many financial institutions. This was very effective, as it did not result in widespread bankruptcies or foreclosures. And then for the small businesses and for the households, we also had the small debt restructuring mechanisms. And so this also avoided large-scale foreclosures and bankruptcies. We also introduced agencies such as a credit counseling and debt management agency to help households better manage their debt. These series of efforts were quite extensive. It was also reinforced by greater transparency requirements, consumer protection initiatives and efforts to enhance financial literacy.

For the small and medium-scale enterprises, there was also a debt restructuring mechanism for them. It was important not only to deal with the lenders but also the borrowers. This was done during the '98 crisis. And since these mechanisms were very successful, they have continued to be in place. Now and then, when there are large-scale borrowings that has gone bad, this Committee was then reactivated again to deal with it.

During the recent Great Financial Crisis, we didn't experience any disruption to our financial system, so a financial crisis was not experienced in our region. Our economies were however affected by the slowdown in global trade. In Malaysia, there was an economic contraction by 1.5% in 2009 and by 2010, we recovered again with a growth of 7.4%. In 2008, despite the headwinds in 4Q, we grew by 4.8%. It was therefore a brief economic contraction. The exchange rate did experience increased volatility but its effects were well intermediated by the financial system.

In terms of the lessons, I would like to add on the highly accommodative policies pursued by the developed countries during this crisis. Many have

already highlighted that an important lesson is that there was an over-reliance on interest rates to bring about a recovery. The political leadership generally looks at the central bank to always respond to such financial and economic setbacks ... even now with the outbreak of Covid, there are statements being made that the cost of borrowing remains high and that central banks could do more. But the lesson is that the management of any form of crisis requires a comprehensive approach. It is therefore an optimal policy mix that includes other policies that are critical in dealing with the crisis. Additionally, when interest rates are kept too low for too long—and we saw this in our own system, when interest rates are too low for too long, it leads to excessive risk taking and it results in asset price inflation which in turn can result in a misallocation of resources.

These are some of the lessons. The current crisis following the outbreak of the pandemic is of course different. But what is important, is that it has not translated into a financial crisis. Globally we did not see this crisis coming and although a number of international organizations did come out to say that we're going to see a financial crisis in the making, it hasn't happened. This is largely because of the lessons the world has learned from previous financial crises. Financial institutions are now better capitalized and better managed. We are therefore not experiencing a financial crisis. It started as a health pandemic but what is different now is everything has worsened much faster. Markets adjust much faster and even the economy adjusts much faster, with an economic contraction being experienced in most economies. The restrictions on movement during the early part of the crisis brought economies to a grinding halt. There is also a greater leverage on technology, changing the way how economies now operate.

This has also translated into a humanitarian crisis. It has also led to rising inequalities and a rise in public debt. These issues need to be managed well before it becomes a serious development. While the focus of the policies have now been, to provide relief for those who have been affected by the effects of the pandemic, one of the lessons is that while you're dealing with the immediate-term issues, you also have to look beyond that into the longer-term horizon and manage the structural issues that are emerging. Rising inequalities, rising indebtedness, and the disruptions in supply are amongst some of these problems. And then there is also the need to exit from the specific measures implemented to address the immediate term issues. Once the objectives of these measures have been achieved, there is a need for an exit from these policies. And again, communications—centralized and consistent communications is very important, because there are many factions giving out information and it can be very destabilizing for businesses and even for households to plan their decision-making in such an environment of such heightened uncertainty. This brings us to the present.

YPFS: Take a couple minutes to talk about the business school. As you were leaving the Bank, it teamed up with MIT to found the Asia School of Business, which is the first business school that was backed by a central bank. And you're on the board. Why did the Bank sponsor this school and what are your goals?

Zeti: Well, following the Asian Financial Crisis, during the resolution and repair of the financial institutions, several CEOs and board members and chairmen were removed. We then looked for people who could lead the financial sector into the 2000s after the crisis. "We needed a new caliber of people, a new generation of leaders." And so we looked around and found there were very few. We therefore had to prepare a pipe line of supply of such talent. As part of the talent development, for leadership development we set up a center in 2003, quite soon after the crisis. Named the International Center for Leadership in Finance (Iclif), it was a standalone Center with programs for CEOs and up-and-coming CEOs and to develop them into effective leaders for the financial sector.

We also developed programs to develop high-powered board members who understood the decisions that were being made in financial institutions. We didn't want a situation where the management said that they had informed the board of what they were doing and for the board to say that, "Management never informed us." I think even in the U.S., you had such situations. We therefore wanted to have high-powered board members who understood the risk of the business. These programs were highly successful. Even for foreign bankers, who came for their board meetings, would attend these programs that were held over a day or two at a time, mentioned that it was one of the best programs that they had attended.

After some years, we explored to partner with a business school and become part of their executive education. This then was abandoned for a number of reasons, among which were that our aspirations didn't coincide with their focus and that some of the financial numbers weren't realistic for us.

We therefore decided to remain as a standalone leadership center. There are actually very few such standalone Centers—otherwise they are usually part of a business school. Then following a fortuitous meeting with the Professor who was the Director of the MIT Supply Chain Management Program, the top school in the field, that planned on establishing a presence in Asia. A local university here in Malaysia then approached the central bank to prepare an economic profile for the country for the submission of their bid. And as it turned out, they were selected. This was the first operation in Asia by this school in Kuala Lumpur. At that time, they asked for my Assistant Governors to be on the board of this local supply chain management school. I of course agreed. They then suggested that we should also talk to the Sloan School.

We were then connected to the business school. When we engaged with the business school, we saw that one thing that made their business school quite different from others. It was their focus on practical implementation—of the practical aspects of entrepreneurship and management. This made it very attractive. This was referred to as Action Learning, where students are required to solve a problem in a corporation based on the foundations and analytics that they learned. Our school has therefore adopted this approach in the education experience we offer. And given that our school is smaller we are able to give our students a greater number of action learning experiences. Our business school is also international with about 70% of the students being foreign.

YPFS: **At that 70%, are the students who are international mostly from the Asian region?**

Zeti: They are from all over the world, including the U.S., Latin America, Africa, Asia and a few from Europe and Central Asia, the Middle East.

YPFS: **So it's truly global.**

Zeti: Yes, it is a very good experience not only for our local students, but also for the foreign students who have interest in Asia. We also want our education offerings to be applicable to the emerging economies and it is in our mission statement, that it is to advance the talent development for the private sector in the emerging world. So it has to be relevant to these environments. Additionally, when they go to these companies for their Action Learning they are usually in teams of four or five students that are from really diverse backgrounds. Culturally, their previous experience would have been so different, but they learn how to work as a team because they have to produce results which are then submitted as presentations and so on.

As the very outset I was asked by the president of MIT, "Why do you want to establish a business school when it is already a crowded space? How were we going to be any different?" My response was that we will be distinct and differentiated in all these ways, in particular, to be relevant to the emerging world which makes up half of the world economy—with focus on the application of the theoretical foundations to this different environment. And now seven years on—it started in 2015—and we've had five batches of students that have graduated. And this year, we have a campus and we hope one day you can come and visit us. Indeed, we should explore the possibility for the Financial Stability Center at Yale University to collaborate with us in our Masters program that is for central bankers, a program that was introduced just this year.

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