BA285/E285 International Finance: Student Project #1

BA 285
International Finance
Professor Richard Lyons

Argentina:
An Assessment of its Devaluation Risk

November 1996

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EXECUTIVE SUMMARY

Since the inception of the Currency Board in April 1991, Argentina has enjoyed an increase in investors' confidence. The enforcement of such a system ensures that inflation rate is under control and increases the credibility of the Argentine government and the economy.

Although the system has survived through several shocks, such as the Mexican peso crisis in late December 1994 and the departure of Cavallo in July 1996, there still exists doubts about the possibility of the Argentine peso devaluation. Economic theory states that real currency appreciation resulted from consistently higher price levels in one country versus another will ultimately impose the pressure of devaluation on the much appreciated currency.

Utilizing the interest rate differential between US and Argentine bank deposits, together with an estimate of the percent of Argentine peso devaluation, we would like to assess the probability of the peso devaluation using data from April 1991 to January 1996. The estimates computed from the model are relatively low, except for a few occasions when the occurrence of specific events led to an increase in devaluation risk. According to the model, the probabilities of devaluation since August 1995 have been settled to a level of approximately 6 - 14%. However, the probabilities should be taken with caution due to the "simplistic" nature of the model and its constraints.

→ PER WHAT TIME PERIOD? ANNUAL?

INTRODUCTION

During the 1980's, Argentina appeared the very model of macroeconomic instability. The public sector deficit was huge, the nation was in default on its foreign debt, hyperinflation reigned, and there was massive capital flight. In 1989, however, the Menem government began a series of economic reforms that continue to the present day. One of the most significant was the April 1991 Law on Convertibility which established a new fixed exchange rate regime whereby the Argentine peso was to be backed 100% by foreign currency reserves and made freely convertible with the US dollar at a one-to-one basis. In short, that law implemented the currency board system in Argentina.

IMMEDIATE IMPLEMENTATION?

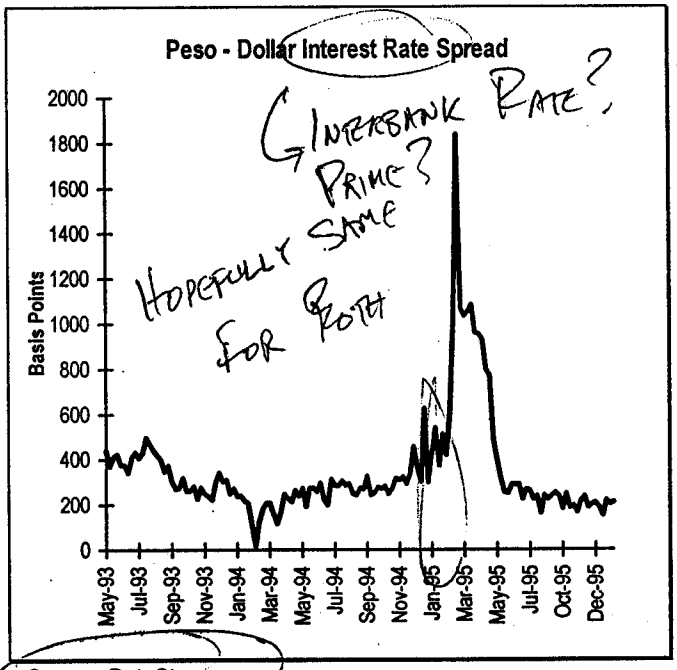
AN EXTERNAL SHOCK : THE MEXICAN CRISIS

"When Mexico sneezes, Argentina catches a cold."[1]

The establishment of a currency board does not automatically come with a speculation-free sentiment. Argentina had to withstand an external shock which resulted from the Mexican financial crisis in late December 1994 and 1995. Through its quick reaction to the impact of Mexico's crisis, Argentina had demonstrated the solidity of its four-year-old convertibility, or fixed exchange rate, program.

With the collapse of the Mexican peso came both the external drains from the currency board-like system and internal drains of both peso and dollar deposits from commercial banks. Bond prices fell sharply, resulting in an increase in yields on both peso and dollar denominated bonds.

During late February 1995, the international banks with branches in Argentina cut off credit lines to their branch operations, citing "country risk" as the rationale for such action. Branch bank managers had to hustle unprepared into the domestic interbank market. The interbank interest rates rose dramatically. In March, the broad money supply fell; dollar deposits and currency outside banks all fell. Peso prime rate increased, dollar interest rates likewise increased. The exchange rate risk exploded, with the peso-dollar interest rate spread moving from 602 basis points at the end of February to 1,836 basis points in the middle of March 1995.



Source: DataStream.

Measures to Deal With the Crisis

With the crisis worsening, the central bank took additional measures to further increase liquidity for banks. As a result, the central bank's liquid reserves fell to a low of 10.2 billion pesos at the end of March,

[1] "Are crashes catching?" The Economist, August 31, 1996: 64.

compared with 15.8 billion pesos in late December. However, at no time during the crisis did the ratio of liquid reserves to the monetary base fall below the statutory minimum of 80%.

The government soon announced a package of measures to contain the financial crisis. It accelerated privatizations, reduced its planned government spending, increased several taxes, and announced plans to borrow up to US$7 billion. The success in putting together the loans opened up the system with a fall in interest rates. After the presidential election in May, all monetary indicators improved. Furthermore, the central bank's liquid reserves held against the monetary base rose above 90 percent. The perceived exchange rate risk was eased.

In December 1995, the Argentine monetary indicators roughly reflected the "pre-tequila" magnitudes. The peso-dollar exchange rate remained absolutely fixed at 1 to 1. Inflation for 1995 was 1.6%, one of the lowest rates in the world and the lowest annual inflation in Argentina since 1944. The central bank's liquid reserves reached $15 billion, almost the pre-tequila level of $15.8 billion. Dollar denominated time deposits was $500 million higher than those of December 1994, and M1 has returned to its December 1994 level. Both the peso and dollar prime interest rates are lower than their pre-tequila levels. The perceived exchange rate risk is actually lower than the pre-crisis level, with the peso-dollar spread at 203 basis points, 91 basis points lower than the pre-crisis spread. Like tempered steel, Argentina's currency board-like system has been toughened by the crisis, and as the peso-dollar spread indicates, the system is stronger than ever.

PURCHASING POWER PARITY AND THE PRESSURE ON THE ARGENTINE PESO

According to the theory of purchasing power parity (PPP), the exchange rate between two currencies is in equilibrium when it equalizes the prices of an identical basket of goods and services of both countries. A currency can be undervalued against another currency if the price movement in the first country is less than the price movement in the second country.

Since the beginning of the Convertibility Plan in April 1991, it is "believed" that the Argentine peso has been overvalued against the dollar and the higher Argentine inflation rate compared to that of US did not help to put an end to the overvaluation. Over time, this buildup of real peso appreciation would put pressure on the exchange rate, resulting in the devaluation of the peso.

CURRENT SITUATION

In July 1996, the Argentine financial markets plunged after the firing of Economy Minister Cavallo. There was hectic trading and high volatility in stocks and bonds. The departure of the architect of Argentina Convertibility Plan was perceived to put the plan at risk. In addition, macroeconomic indicators such as large current account and fiscal deficit, slow GDP growth, and increasing unemployment rates seem to push the system towards explosion. Hence, one way to release the pressure from the economic system is to devalue the Argentine peso.

METHOD

The Mexican peso crisis has proved Argentina's ability to react towards and survive through external shocks. The question now is whether Argentina can endure internal factors. Given the difficult current economic situation, it is often argued that the peso is prone to be devalued. In this paper, we will attempt to use a model so as to come up with a measure to quantify the probability of the Argentine peso devaluation. The period under study covers the past five years since the beginning of the convertibility plan. We will be able to evaluate how the probability of peso devaluation evolved over time and provide insights for future probable devaluation.

The hypothesis is that given the fixed exchange rate regime (the nominal exchange rate of $1 per peso has been used throughout our analysis), the existence of interest rate differential between the US and Argentina can largely be explained by devaluation risk. Theoretically, the expected return in US $ for investment in the US should equal to the expected return in Argentine peso, otherwise it would mean either the exploitation of arbitrage opportunities or the existence of devaluation risk that is associated with interest rate differential. Hence, the expected return in US $ for investment in the US can be expressed as the weighted average of the expected return in Argentine peso with and without devaluation, weighted by the respective probabilities.

NOT RISK FREE!

UIP

Our model states that the probability of the devaluation of Argentine peso can be assessed using the following formula:

$$r_{\$} = (P_{NO\ DEVAL})(r_P) + (1 - P_{NO\ DEVAL})[(r_P)(1 - \%Deval)] \qquad [1]$$

where $r_{\$}$ = US bank deposit interest rate in \$

$P_{NO\ DEVAL}$ = probability of no Argentine peso devaluation

r_P = Argentine bank deposit interest rate in pesos

% Deval = % of Argentine peso devaluation

Equation [1] shows one equation with two unknowns, namely probability of devaluation and percent of devaluation. We decide to estimate the latter. To estimate the percent of Argentine peso devaluation, the 1992 Big Mac Index launched by *The Economist* is used as an anchor for the under-/overvaluation of the Argentine peso for the corresponding period. Although the Big Mac Index is a light-hearted guide to whether currencies are under- or overvalued and burgernomics does have its flaws, an economist at the University of Western Australia concludes that "the Big Mac index is surprisingly accurate in tracking exchange rates over the longer term."[2]

Solving for $P_{NO\ DEVAL}$:

$$P_{NO\ DEVAL} = \frac{r_{\$} - r_P + (r_P)(\%Deval)}{(r_P)(\%Deval)} \qquad [1']$$

DATA

For both the US and Argentina, annualized 30-day bank deposit interest rates[3] for the period April 1991 to January 1996 have been obtained (see Exhibits 1 and 2). The 30-day interest rates are used instead of the 90-day rates since the Argentine 90-day rates display a much higher volatility and would introduce additional noise in the analysis if one were to use them. Exhibit 3 shows the annualized Argentina bank interest rates for both 30-day and 90-day deposits. It also should be noted that the use of annualized rates will result in a higher probability of devaluation than using the monthly interest rates due to the "magnified"

→ MAYBE NOISE, MAYBE INFORMATI

[2] "McCurrencies: where's the beef?" The Economist, April 27, 1996: 82.

[3] DataStream.

interest rate differential in the former case. This also makes intuitive sense since the probability of an event happening is higher if the time span is longer. Consumer price index[4] (CPI) for the same period have been obtained (see Exhibits 4 and 5) to project the percent of Argentine peso overvaluation from a baseline measure. We use a baseline of 52%[5] overvaluation of the Argentine peso in April 1992 according to the Big Mac Index. The estimates for other months during April 1991 to January 1996 can then be obtained by using the change in real exchange rate ($\Delta e'_{\$/P}$), which can be obtained as follows:

$$\%\Delta e'_{\$/P} = \%\Delta e_{\$/P} + \%\Delta P_{ARG} - \%\Delta P_{US} \qquad [2]$$

where $e_{\$/P}$ = nominal exchange rate

P_{ARG} = price level in Argentina

P_{US} = price level in US

Since $e_{\$/P} = 1$ throughout the period under study, $\%\Delta e_{\$/P} = 0$. Equation [2] therefore becomes

$$\%\Delta e'_{\$/P} = \%\Delta P_{ARG} - \%\Delta P_{US} \qquad [2']$$

Hence, the probability of Argentine peso devaluation (i.e. $1 - P_{NO\ DEVAL}$) over time can be obtained using equations [1'] and [2'].

SENSITIVITY ANALYSIS - ALTERNATIVE ESTIMATES FOR PERCENT OF OVERVALUATION

Two other alternative methods of estimation have been considered:

(1) *Four Big Mac Indexes* - Big Mac indexes for April of years 1992, 1994, 1995, and 1996 have been adopted as the estimates of percent peso overvaluation for the corresponding month. For the period April 1991 to April 1992, estimates for the peso overvaluation are computed by adjusting the 52% overvaluation by changes in CPI. After April 1992, monthly estimates of peso overvaluation are obtained by linear interpolation between the annual Big Mac Index. The following table shows the Hamburger Index for Argentina published by *The Economist*.

[4] DataStream.

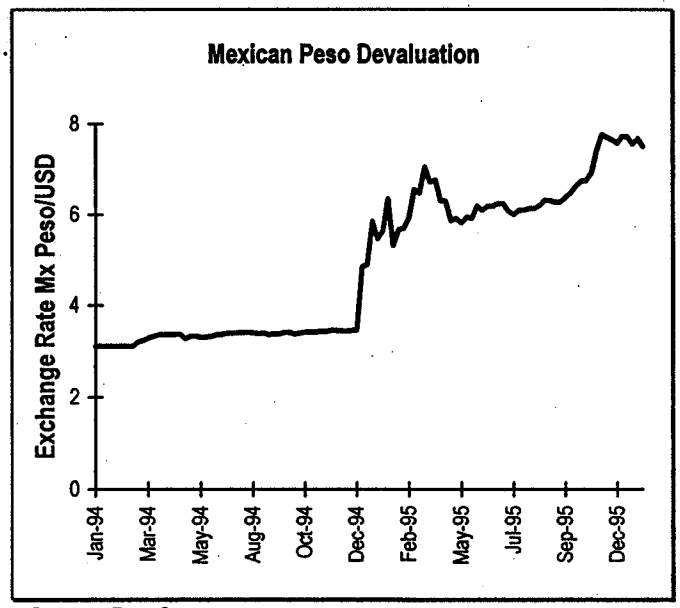
[5] "Big MacCurrencies," The Economist, April 15, 1995: 74.

Year	% Overvaluation of Argentine Peso
1992	52%
1994	57%
1995	29%
1996	27%

Source: The Economist.

Wow. Cut In Half

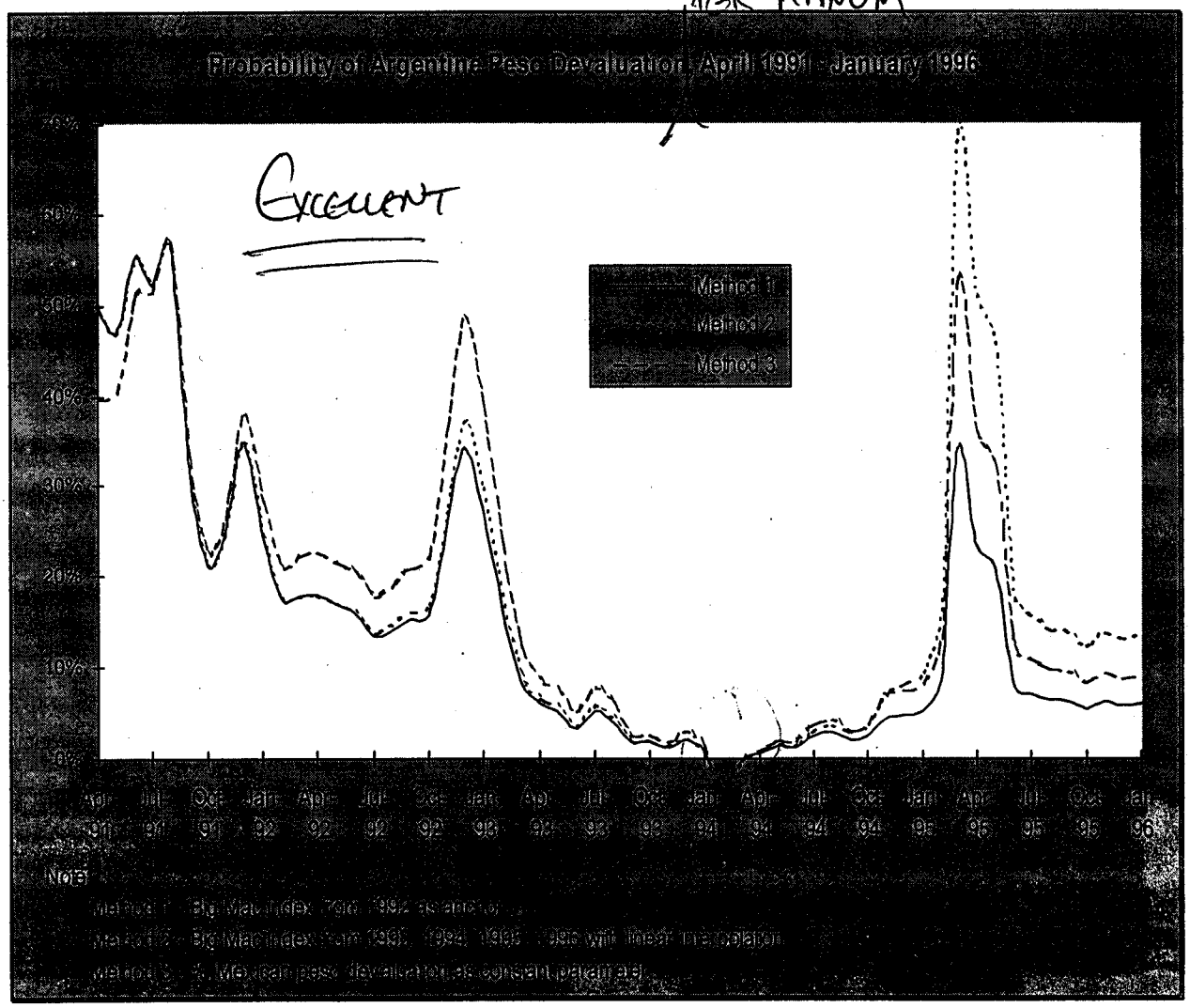
(2) *Percent of Mexican peso devaluation in 1994* - An estimate of the Mexican peso devaluation is obtained from the difference in exchange rates between the end of November and end of December 1994 (month of the Mexican peso crisis). This estimate (41%) is then used as an approximation of the percent of Argentine peso overvaluation for the whole period under study. The figure to the right displays the Mexican peso exchange rates from January 1994 to January 1996.



Source: DataStream.

FINDINGS

The estimated probabilities of Argentine peso devaluation for the period April 1991 to January 1996 using the three methods are shown in the following figure.



In general, all three methods display the same trend. The probability of devaluation increased in the early stage of the Currency Board from April to August 1991. Between August 1991 and February 1994, there was a downward sloping trend with two spikes, both at the end of the corresponding year in December. The first spike in December 1991 was due to a corruption scandal relating to the supply of contaminated milk to a government welfare program and political instability when Cavallo's position in the government was threatened by Roberto Alemann, an economist who was reported to have been offered a senior

government post. The second spike in December 1992 was largely due to the loss of government popularity. During that period, talk of impending recession repeatedly surfaced in the media and news of trade deficit were leaked and exaggerated by the press. It was not until people realized that the Central Bank had started to buy dollars at a rate of around $100m per day and that the economy was still growing, that the turnaround in expectation finally came. In the meantime, two incidents happened in early 1992 which explained the downward trend during that period. In March 1992, the International Monetary Fund approved an Extended Fund Facility which shows that the public sector finances are on a sound state. A month later, the Brady deal for Argentina is agreed. The effect of the agreement was a surge in capital inflows and reduction in domestic interest rates.

It should be noted that in both February and March 1994 the probability of devaluation is negative. This is due to the fact that the Argentine interest rates were less than the US interest rates during those months. However, we believe this is ~~irrelevant and~~ non-representative since it only occurred two times in the sample of five years' data. Following the all-time low probability in February 1994 came the slightly upward sloping pattern, and rapidly increasing from January 1995, peaking in March 1995. As mentioned earlier, this is due to the external shock brought about by the Mexican peso crisis in December 1994. However, since then, the probabilities have declined, although not as rapid as its increase, and settled roughly at the "pre-tequila" level.

A comparison between the three methods shows that method 1 (Big Mac Index adjusted by CPI) consistently provides with the least conservative estimates. The probabilities obtained from method 1 are always the lowest among the three. Method 2 (4 Big Mac Indexes) gives exceedingly high probabilities after the Mexican peso crisis, approximately double of that of method 1. Method 3 (Mexican devaluation estimate), however, generated higher probabilities prior to December 1994, and intermediate probabilities after the Mexican crisis.

WHY LEAST CONSERVATIVE?

A closer look at the relationship between the percent of Argentine peso devaluation and computed probabilities in Exhibit 6 raises the following question: it seems counter intuitive that in some cases (both methods 1 and 2), the higher the percent peso devaluation, the lower the probability of devaluation. This pattern is present in about half of the data. It would be interesting to look at how the probabilities change in method 3, since the percent peso devaluation is held constant at 41%. According to the results in method 3, it suggests that the probabilities of devaluation are driven more by interest rate differential than by the

percent peso devaluation measured by PPP. PPP itself may have its own shortcoming. It is difficult to both obtain an anchor and choose a normal base year for applying the PPP. Although the 1992 Big Mac Index has been used in both methods 1 and 2, the 1995 percent peso devaluation shows a huge difference between the two methods. In method 1 when adjusting by changes in CPI, we obtain an estimate of 63% whereas the Big Mac Index gives an estimate of 29%. This shows the relevance of the base period issue discussed above.

Yes

The main limitation of the model include the fact that the model may be too simple for use in explaining such complex matters as currency devaluation risk. Important factors such as investors' sentiment towards the likelihood of devaluation, confidence in the country and its reform process, structural changes undergone in the country, and the possibility of external shocks such as the Mexican peso crisis are all ignored in the model. One may argue that the interest rate differential may already have incorporated some of these factors and we believe this is a valid argument to a certain extent. The key is that it is highly unlikely and impossible to measure the magnitude and effects of these "subjective" factors.

FINAL COMMENTS

While it is true that the model shows a relatively low probability (approximately 6 - 14%) of Argentine peso devaluation, we believe these estimates should be taken with a grain of salt and the "*true*" probability is higher than that provided by the model. It is of no doubt that people's confidence in the currency has improved. Argentina's ability to cope with and adapt to external shock has been proven and that investors can now better distinguish the differences between countries in Latin America. However, the existence of internal "tests" certainly does not warrant Argentina for such low probability of devaluation. As discussed above, there exists a lot of limitations in the model and we maintain that a more sophisticated model should be used to control for other factors so as to improve the precis~~eness~~ion of the model.

PER YEAR THOUGH, NOT "AT ANY TIME IN THE FUTURE" AT LEAST THAT'S THE INTERPRETATION FROM ANNUALIZED INTEREST RATES

Exhibit 1

30-Day Bank Deposit Interest Rates

Country Currency	US Dollars	ARG Pesos
4/15/91	7.77%	24.02%
5/15/91	7.79%	24.31%
6/15/91	7.82%	28.78%
7/15/91	7.82%	28.93%
8/15/91	7.77%	31.07%
9/15/91	7.76%	21.41%
10/15/91	7.77%	17.04%
11/15/91	7.77%	18.58%
12/15/91	7.75%	23.33%
1/15/92	7.70%	19.28%
2/15/92	7.70%	16.35%
3/15/92	7.70%	16.77%
4/15/92	7.70%	17.04%
5/15/92	7.71%	16.63%
6/15/92	7.67%	16.08%
7/15/92	7.67%	14.98%
8/15/92	7.65%	15.39%
9/15/92	7.65%	16.21%
10/15/92	7.63%	16.63%
11/15/92	7.65%	22.56%
12/15/92	7.65%	27.57%
1/15/93	7.65%	23.58%
2/15/93	7.60%	17.32%
3/15/93	7.61%	12.55%
4/15/93	7.72%	11.35%
5/15/93	7.65%	10.82%
6/15/93	7.65%	9.77%
7/15/93	7.64%	10.82%
8/15/93	7.65%	10.16%

Country Currency	US Dollars	ARG Pesos
9/15/93	7.60%	8.73%
10/15/93	7.60%	8.73%
11/15/93	7.56%	8.34%
12/15/93	7.55%	8.86%
1/15/94	7.57%	8.08%
2/15/94	7.57%	5.66%
3/15/94	7.54%	7.44%
4/15/94	7.48%	7.83%
5/15/94	7.48%	8.34%
6/15/94	7.42%	8.21%
7/15/94	7.03%	8.60%
8/15/94	6.93%	8.73%
9/15/94	6.89%	8.21%
10/15/94	6.89%	8.47%
11/15/94	6.17%	8.99%
12/15/94	6.28%	9.38%
1/15/95	6.26%	9.64%
2/15/95	6.31%	11.75%
3/15/95	6.32%	28.02%
4/15/95	6.07%	20.84%
5/15/95	6.10%	19.28%
6/15/95	5.96%	10.95%
7/15/95	5.91%	10.43%
8/15/95	5.77%	9.77%
9/15/95	5.72%	9.64%
10/15/95	5.67%	9.12%
11/15/95	5.65%	9.51%
12/15/95	5.62%	9.25%
1/15/96	5.65%	9.38%

Exhibit 2
Annualized 30-Day Bank Deposit Interest Rates, April 1991 - January 1996

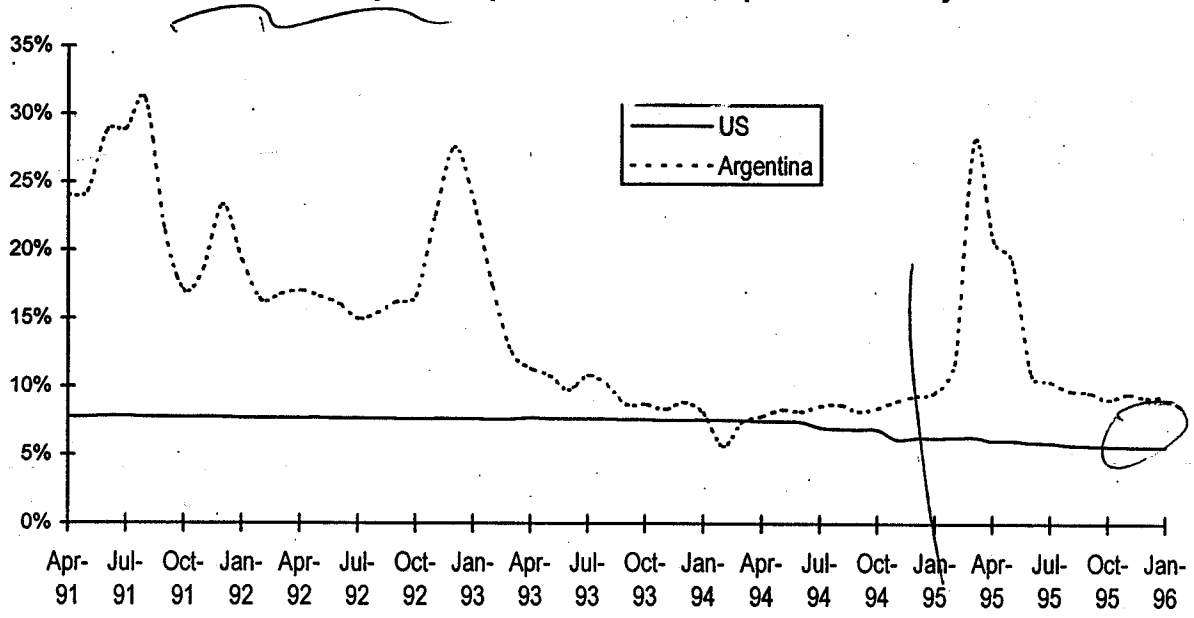


Exhibit 3
Annualized Argentina Bank Deposit Interest Rates, April 1991 - January 1996

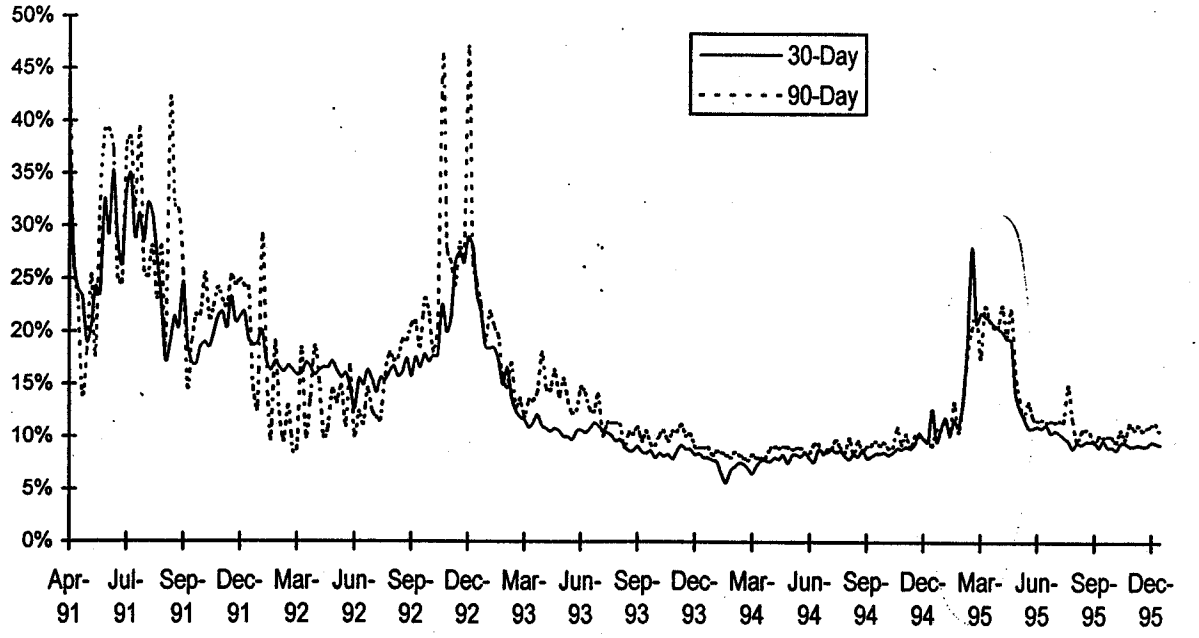


Exhibit 4

Consumer Price Index

Monthly Percentage Change

	US	ARG		US	ARG
4/15/91	0.16%	5.51%	9/15/93	0.22%	0.82%
5/15/91	0.28%	2.80%	10/15/93	0.41%	0.57%
6/15/91	0.32%	3.12%	11/15/93	0.07%	0.06%
7/15/91	0.16%	2.59%	12/15/93	0.00%	-0.01%
8/15/91	0.28%	1.30%	1/15/94	0.26%	0.10%
9/15/91	0.43%	1.77%	2/15/94	0.37%	0.00%
10/15/91	0.16%	1.35%	3/15/94	0.33%	0.14%
11/15/91	0.27%	0.39%	4/15/94	0.15%	0.24%
12/15/91	0.08%	0.65%	5/15/94	0.07%	0.35%
1/15/92	0.16%	3.04%	6/15/94	0.33%	0.39%
2/15/92	0.35%	2.15%	7/15/94	0.25%	0.92%
3/15/92	0.50%	2.10%	8/15/94	0.40%	0.21%
4/15/92	0.15%	1.29%	9/15/94	0.29%	0.68%
5/15/92	0.15%	0.67%	10/15/94	0.07%	0.32%
6/15/92	0.35%	0.78%	11/15/94	0.11%	0.23%
7/15/92	0.19%	1.73%	12/15/94	0.00%	0.22%
8/15/92	0.31%	1.50%	1/15/95	0.43%	1.25%
9/15/92	0.27%	1.03%	2/15/95	0.39%	0.00%
10/15/92	0.38%	1.27%	3/15/95	0.32%	-0.45%
11/15/92	0.11%	0.46%	4/15/95	0.32%	0.46%
12/15/92	-0.08%	0.28%	5/15/95	0.21%	0.02%
1/15/93	0.53%	0.83%	6/15/95	0.21%	-0.21%
2/15/93	0.34%	0.73%	7/15/95	0.00%	0.41%
3/15/93	0.34%	0.75%	8/15/95	0.25%	-0.24%
4/15/93	0.30%	1.05%	9/15/95	0.21%	0.16%
5/15/93	0.11%	1.29%	10/15/95	0.32%	0.34%
6/15/93	0.15%	0.72%	11/15/95	-0.07%	-0.23%
7/15/93	0.00%	0.32%	12/15/95	-0.07%	0.10%
8/15/93	0.26%	0.02%	1/15/96	0.60%	0.30%

ADD 2 COLUMN? GAP & CUMULATIVE GAP?

Exhibit 5
Consumer Price Inflation Percentages, 1991 - 1995

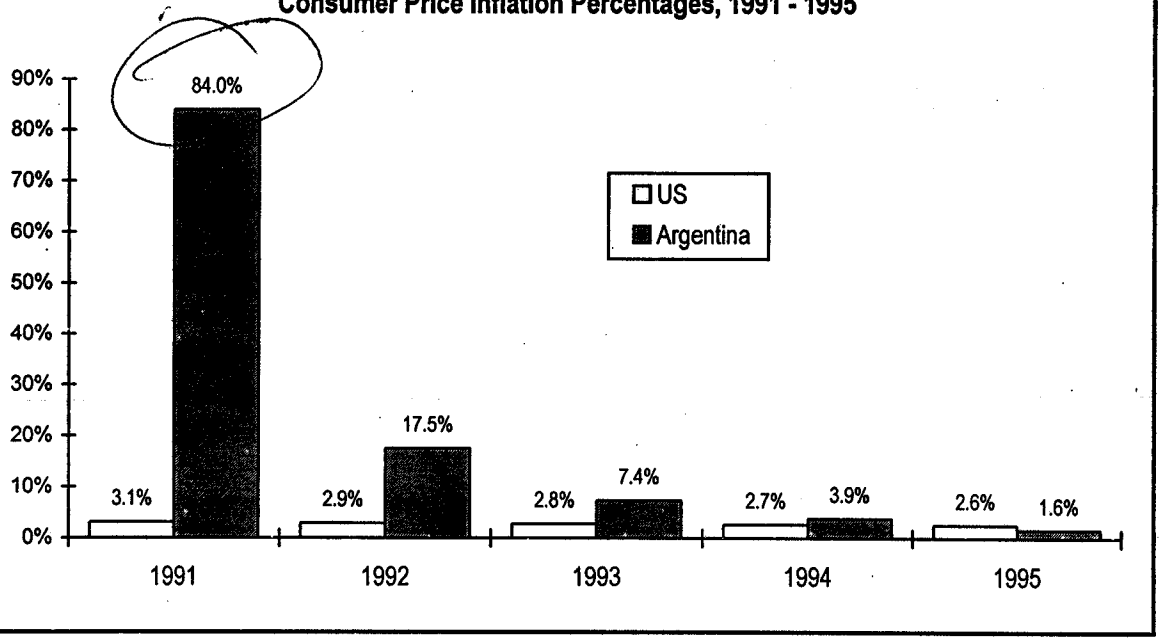


Exhibit 6

Percent Argentine Peso Devaluation and Estimated Probability of Devaluation

	Method 1		Method 2		Method 3	
	% Peso Devaluation	Prob. of Devaluation	% Peso Devaluation	Prob. of Devaluation	% Peso Devaluation	Prob. of Devaluation
4/15/91	33%	50%	33%	50%	41%	40%
5/15/91	35%	47%	35%	47%	41%	40%
6/15/91	38%	55%	38%	55%	41%	51%
7/15/91	40%	52%	40%	52%	41%	51%
8/15/91	41%	56%	41%	56%	41%	57%
9/15/91	43%	32%	43%	32%	41%	33%
10/15/91	44%	21%	44%	21%	41%	23%
11/15/91	44%	25%	44%	25%	41%	26%
12/15/91	45%	35%	45%	35%	41%	38%
1/15/92	47%	24%	47%	24%	41%	28%
2/15/92	49%	18%	49%	18%	41%	21%
3/15/92	51%	18%	51%	18%	41%	22%
4/15/92	52%	18%	52%	18%	41%	23%
5/15/92	53%	17%	52%	17%	41%	22%
6/15/92	53%	16%	52%	16%	41%	21%
7/15/92	54%	13%	53%	14%	41%	18%
8/15/92	56%	14%	53%	15%	41%	19%
9/15/92	56%	15%	53%	16%	41%	21%
10/15/92	57%	16%	53%	17%	41%	22%
11/15/92	58%	26%	53%	28%	41%	36%
12/15/92	58%	34%	54%	37%	41%	49%
1/15/93	58%	27%	54%	30%	41%	39%
2/15/93	59%	17%	54%	18%	41%	24%
3/15/93	59%	8%	54%	9%	41%	12%
4/15/93	60%	6%	55%	7%	41%	9%
5/15/93	61%	5%	55%	6%	41%	8%
6/15/93	62%	3%	55%	4%	41%	5%
7/15/93	62%	5%	55%	6%	41%	8%
8/15/93	62%	4%	55%	5%	41%	6%
9/15/93	62%	2%	56%	2%	41%	3%
10/15/93	62%	2%	56%	2%	41%	3%
11/15/93	62%	1%	56%	1%	41%	2%
12/15/93	62%	2%	56%	2%	41%	3%
1/15/94	62%	1%	56%	1%	41%	1%
2/15/94	62%	-3%	57%	-3%	41%	-5%
3/15/94	62%	0%	57%	0%	41%	0%
4/15/94	62%	1%	57%	1%	41%	1%
5/15/94	62%	1%	55%	2%	41%	2%
6/15/94	62%	1%	52%	2%	41%	2%
7/15/94	63%	2%	50%	3%	41%	4%
8/15/94	63%	3%	48%	4%	41%	4%
9/15/94	63%	2%	45%	3%	41%	3%
10/15/94	63%	2%	43%	4%	41%	4%
11/15/94	63%	4%	41%	7%	41%	7%
12/15/94	64%	5%	38%	8%	41%	8%
1/15/95	64%	5%	36%	9%	41%	8%
2/15/95	64%	8%	34%	16%	41%	13%
3/15/95	63%	34%	31%	69%	41%	53%
4/15/95	63%	23%	29%	51%	41%	36%
5/15/95	63%	21%	29%	46%	41%	32%
6/15/95	63%	8%	29%	17%	41%	12%
7/15/95	63%	7%	29%	16%	41%	11%
8/15/95	63%	6%	28%	14%	41%	10%
9/15/95	63%	6%	28%	14%	41%	10%
10/15/95	63%	6%	28%	12%	41%	8%
11/15/95	63%	6%	28%	14%	41%	9%
12/15/95	63%	6%	28%	13%	41%	9%
1/15/96	62%	6%	28%	14%	41%	9%

EVA & VIVIANA —

GREAT PAPER. I REALLY LIKED IT. SOME SPECIFIC COMMENTS:-

(1) PER MY COMMENTS INSIDE, I THINK YOU ARE MISINTERPRETING THE MAGNITUDE OF THESE PROBABILITIES. THEY LOOK VERY REASONABLE TO ME.

(2) VOLATILE 90-DAY INTEREST RATES MIGHT BE SIGNALLING PROBABILITIES THAT ARE NOT "LINEAR" OVER TIME (I.E., THE PROBABILITY OF DEVALUATION OVER THE NEXT 90 DAYS ≠ 3 TIMES THE PROBABILITY OF DEVALUATION OVER 30).

(3) I'M WONDERING IF THESE INTEREST RATES ARE DIRECTLY COMPARABLE WITH RESPECT TO OTHER CHARACTERISTICS (E.G. LIQUIDITY, DEFAULT RISK, ETC.). THIS MAY HELP EXPLAIN WHY λ THE PROB. GOES NEGATIVE IN 94.

SUPER JOB

RICH