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February 2, 2009

Congressional Research Service

Report RL31169

*Argentina: Economic Problems and Solutions*

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Updated October 26, 2001

**Abstract.** For much of the post-World War II era, when the financial press focused on Argentina, it was to highlight bouts of very high inflation and failed stabilization efforts. Argentina again commands the attention of the financial press, but this time inflation is not the issue. Not only has Argentina had five years of stable prices, but over the past 2 years, the price level in Argentina has actually fallen. Thus, it is now speculated that Argentina may have to change its monetary regime not because of inflation, as had been perennially the case, but to combat falling income, rising unemployment and a possible default on its national debt. How did Argentina come to this end? In large measure it is the consequence of the method chosen to deal with the chronic tendency of Argentine public finance to produce inflation, To a lesser degree, it is due to the government's failure to recognize that the method chosen to control inflation also placed constraints on fiscal policy, and to two unavoidable economic shocks that reduced the price of Argentine exports and made Argentine products uncompetitive in Brazil, Argentina's largest trading partner.

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# CRS Report for Congress

Received through the CRS Web

## **Argentina: Economic Problems and Solutions**

**October 26, 2001**

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# Argentina: Economic Problems and Solutions

## Summary

After a long history of high inflation, Argentina decided in 1991 to link its currency rigidly to the U.S. dollar and replaced its discredited central bank regime with a monetary arrangement known as a currency board. With this change, peso currency became backed by the U.S. dollar and inflation was brought to an end. The United States derives revenue, called seigniorage, from this use of the dollar.

With the establishment of a currency board Argentina tied itself to the American currency area as if it were California or Vermont. The theory of optimum currency areas suggests that this was not a wise choice. First, little trade takes place between the U.S. and Argentina (in 1999, imports from and exports to the U.S. were between 1.0% and 2.0% of Argentina's GDP) while a large amount of American output is used internally. Theory suggests that the two such regions should be linked by flexible exchange rates. Second, there are mechanisms that enable the American currency area to work smoothly in the face of negative shocks that are not available to Argentina. These include the ability of American labor and capital to move from areas strongly affected by negative shocks to areas less affected, the integration of the nation's financial system that makes possible the financing of regional trade imbalances, and fiscal transfers that target areas of high unemployment. The United States also relies on flexible exchange rates to cushion external negative shocks, and if the shocks have a wide effect, monetary and fiscal policy can be used to combat them. Argentina cannot avail itself of these mechanisms and must deal with negative external shocks primarily through *deflation*. Given the well documented downward rigidity of wages and prices in the short run, this can be a very difficult path to follow.

Argentina has had to follow this path in the face of four negative shocks: the appreciation of the dollar, the fall in world commodity prices, the depreciation of the Brazilian *real*, and the increase in real interest rates in the United States. In addition, Argentina has also had to cope with a debt problem.

A currency board imposes substantial constraints on fiscal policy. Fiscal deficits can no longer be financed by central banks. Thus, Argentina's fiscal behavior was going to have to approximate that of an American state. This has not happened. The fiscal deficit of the consolidated public sector has been in excess of 4% of GDP, unlike the behavior of American states. These deficits have added substantially to the national debt, raising concerns that Argentina will default on its debt. Speculators have attacked, thus far unsuccessfully, the Argentine peso several times over the past 3 years.

Argentina has dealt with its burgeoning debt through efforts to lengthen its maturity and pay off existing debts with loans from international financial institutions, banks, and others. The debt problem will continue until the fiscal deficits end. Argentina has dealt with its macro problem by imposing multiple exchange rates on exports and imports. In addition, when the dollar and the euro reach parity, the peso will be linked to both currencies. Dollarization and altering the exchange rate have also been discussed. They pose a number of serious problems. This report will not be updated.

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# Argentina: Economic Problems and Solutions

For much of the post-World War II era, when the financial press focused on Argentina, it was to highlight bouts of very high inflation and failed stabilization efforts.<sup>1</sup> Argentina again commands the attention of the financial press, but this time inflation is not the issue. Not only has Argentina had 5 years of stable prices, but over the past 2 years, the price level in Argentina has actually fallen. Thus, it is now speculated that Argentina may have to change its monetary regime not because of inflation, as had been perennially the case, but to combat falling income, rising unemployment and a possible default on its national debt. How did Argentina come to this end? In large measure it is the consequence of the method chosen to deal with the chronic tendency of Argentine public finance to produce inflation. To a lesser degree, it is due to the government's failure to recognize that the method chosen to control inflation also placed constraints on fiscal policy, and to two unavoidable economic shocks that reduced the price of Argentine exports and made Argentine products uncompetitive in Brazil, Argentina's largest trading partner.

## An Overview of the Argentine Economy

Very high inflation rates, failed stabilization efforts, and a long period of economic stagnation are noticeable features of the economic history of Argentina in the post-World War II era. A compelling case can be made that the history of chronic inflation is a product of the public finance practices of the Argentine government. In 1990, Argentina was once again in the midst of a serious inflation. Prices for the year rose on average between 2000% and 3000%. In 1991, the government engineered yet another stabilization effort, the so-called Convertibility Plan. A unique feature of this program was the linkage of the Argentine currency to the U.S. dollar on a rigid one-to-one basis.

The data in Table 1 show that the plan was successful in bringing an end to inflation. Argentina has enjoyed at least 5 years of stable if not falling prices (and compared to the 1980s, a decade of stable prices). However, price level stability has not gone hand-in-hand with low unemployment and an end to the business cycle. Rather, unemployment has been high and has also shown a tendency to rise; and economic growth, while initially strong, has recently turned negative. While economic growth began to slow in 1998, an actual contraction of income began in 1999 and this has continued through 2000 and into 2001 (although the data for both years

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<sup>1</sup> This paper is based on an earlier, now archived study, CRS Report RS20796, *The Troubled Argentine Economy: The Role of the Monetary System and the Exchange Rate Regime*, co-authored with M. Angeles Villareal. Her contribution to this collaborative effort is gratefully acknowledged.

remain incomplete). The current account of the balance of payments has been in deficit since the Convertibility Plan was implemented, indicating that Argentina continues to borrow abroad. Argentina has had a fiscal deficit over this same period that, since 1996, has been large relative to GDP.<sup>2</sup> The cumulative budget deficit since 1993 has increased the national debt by about 20%.

**Table 1. Selected Economic and Financial Indicators: 1993-2000**

	1993	1994	1995	1996	1997	1998	1999	2000
Real GDP (1993 US\$b)	236.5	250.3	243.2	256.6	277.4	288.1	278.3	276.9
Real GDP Growth (%)		5.8	-2.8	5.5	8.1	3.9	-3.4	-0.5
Unemployment Rte. (%)	9.1	11.7	15.9	16.3	NA	14.1	15.5	NA
Inflation CPI (%)	10.7	4.1	3.4	0.2	0.5	0.9	-1.2	-0.9
Current Acct. Bal. (US \$b)	-8.0	-11.0	-5.0	-6.5	-12.0	-14.3	-12.2	-10.8
Current Acct. Bal. (% of Nominal GDP)	3.4	4.3	1.9	2.4	4.1	4.8	4.3	3.8
Fiscal Deficit (% of Nominal GDP)	0.7	0.7	0.6	1.9	1.5	1.4	2.9	*

Source: IMF. *International Financial Statistics*.

\* Through the first three quarters of 2000, the fiscal deficit averaged 1.8% of GDP.

## The Monetary Regime, Anti-Inflation Policy, and the Consequences

### The New Monetary Regime

An important part of the 1991 Convertibility Plan was to fix the exchange rate of the Argentine peso to the dollar on a one-to-one basis. This in itself, however, could not guarantee a low inflation rate since it was not an effective constraint on the issuance of money, the key to controlling inflation. To control the issuance of money, the Argentines abandoned their central bank based monetary regime, which they felt lacked credibility, and set up a monetary arrangement known as a *currency board*. Under this arrangement, *currency* could be issued only if the currency board had an

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<sup>2</sup> The budget deficit reported in Table 1 is for the central government. The consolidated public sector deficit for 1997 through 2000 as a percentage of GDP is, respectively, 2.1%, 2.1%, 4.2%, and 3.6%. It is expected to be 3.1% in 2001. The deficit is accounted for by interest payments on government debt which has risen from 2.3% of GDP in 1997 to an estimate of 4.7% of GDP in 2001. If it were not for interest payments, the remainder of the consolidated budget would be in surplus for this period except for 1999.

equivalent amount of dollars. Each Argentine peso note was thus backed by an American dollar (no additional dollars, no additional pesos). This 100% backing did not apply to any of the deposits supplied by Argentine financial institutions (such as checking deposits) that for most developed economies are the principal part of their money supply. Nevertheless, Argentine banks have been willing to supply dollar-denominated deposits. By the middle of 2001 about two-thirds of all deposits were dollar denominated.<sup>3</sup>

While the currency board guarantees only that the currency is backed by dollars, this guarantee also constrains how many loans banks can make and the amount of deposits they can accept since deposits are convertible into currency on demand and, hence, into dollars. That this constraint is effective is evidenced by the low inflation rate experienced in Argentina since the institution of the currency board. This new monetary regime linked Argentina to the United States currency area. In an economic sense Argentina's relationship to the U.S. currency area is now much like that of any state such as Wisconsin or California.<sup>4</sup> As explained below, this linkage did not ensure that Argentina would enjoy access to the mechanisms that make the American currency area function smoothly.

## The Anti-Inflationary Policy

The fixed exchange rate and the currency board were designed to ensure that Argentina would have a low inflation rate, one similar to that in the United States. To see why this is so, suppose that Argentina had a higher inflation rate than the U.S. The people of Argentina would now see prices in Argentina that were higher than comparable goods and services that were available from the United States and elsewhere. They would thus tend to switch their spending from home country goods and services to the now cheaper substitutes available from the United States or elsewhere in the world. Similarly, non-Argentines would find Argentina an increasingly expensive country to buy from and they would switch their purchases to cheaper sources of supply. This would result in a growing trade deficit for Argentina. Under a currency board and fixed exchange rates this trade deficit would have to be covered by a loss of currency and shrinkage of the money supply.<sup>5</sup> The reduction in money supply and money spending in Argentina would then bring the rate of inflation in Argentina into line with that in the United States and keep it there.<sup>6</sup>

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<sup>3</sup> See Thomas J. Trebat. Salomon Smith Barney (July 10, 2001). Mr. Trebat cites the Central Bank of Argentina.

<sup>4</sup> Because all the states in the United States use a common currency, they are in essence linked to one another by rigidly fixed exchange rates. The dollars that circulate in Wisconsin will buy a dollar's worth of goods and services in New York or any other place in the U.S. common currency area.

<sup>5</sup> It is possible in the short run for Argentina to receive an inflow of foreign capital that could forestall the shrinkage in the money supply and money spending. The inflow of foreign capital could thus finance the growing trade deficit. This might continue for some time.

<sup>6</sup> This does not mean that Argentina will have exactly the same rate of inflation as the United States (continued...)

Important to the anti-inflation program is that the currency board cannot issue currency based on any domestic asset such as Argentine government bonds. Currency issues must be based on the possession of foreign assets. In the case of Argentina, these are dollar-denominated assets. In the past, the Argentine central bank was used as the engine of inflation since it was forced to purchase government bonds in exchange for currency, the means used to finance the large fiscal deficits.<sup>7</sup> What is seldom appreciated about fixed exchange rates and a currency board is that they are not only a monetary regime, but also a fiscal regime, and they impose a great deal of restraint on governments. In particular, this monetary regime forecloses the option of monetizing government budget deficits by central banks. Governments are forced to finance budget deficits by selling interest-bearing debt to domestic banks and the public or to foreigners.

## The Argentine Fiscal Regime

The single most important reason for the long inflationary history of Argentina has been unbalanced government budgets. Large budget deficits have been financed by the expedient of printing money and this has fueled inflation (the classic case of too much money chasing too few goods and services). Given that history, one might have expected that when Argentina changed monetary regimes in 1991, it would also have embraced a very conservative fiscal regime. Yet, this appears not to have been the case. The data in Table 1 show that Argentina has had a budget deficit since the stabilization was implemented.<sup>8</sup> In 1999, the last year for which complete data are available, it reached nearly 3% of GDP.<sup>9</sup> The national debt of Argentina is now estimated to be about \$150 billion dollars or about 50% of GDP. Some portion of this debt is owed to foreigners. What the Argentine government appears to have

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<sup>6</sup> (...continued)

States. Each economy has a large non-tradeable goods sector, and prices in this sector enter the price index and make it possible for the recorded rates of inflation in the two countries to be somewhat different.

<sup>7</sup> Argentina does not have a classic currency board. The Argentine currency board legislation does permit some holding of government bonds. But these holdings must be purchased at market prices, cannot exceed 33% of total reserves, and cannot increase by more than 10% in any one year. Many observers regard this departure from a classic currency board as minor. See, for example, Francois R. Velde and Marcelo Veracierto. "Dollarization in Argentina." *Economic Perspectives*. Federal Reserve Bank of Chicago. First Quarter 2000.

<sup>8</sup> While budget deficits are projected for the current and near term fiscal years, it should be noted that Argentina has recently enacted drastic fiscal measures to achieve a zero deficit. There is, however, an important question about the degree to which the budget projections provide unambiguous information about the fiscal position of the Argentine government. This is because the government either owns or guarantees the operation of various enterprises. It is thus contingently liable for these businesses. In the current economic downturn, contingencies could become realities, substantially increasing the realized budget deficits. Those who speculate against the Argentine peso are likely to base their assessments on the degree to which these contingencies can become realities.

<sup>9</sup> This is the deficit of the central government as a percentage of GDP. The deficit of the consolidated public sector reached 4.2% of GDP.



overlooked is that even though Argentina is a sovereign state, when it pegged its currency to the dollar, its fiscal behavior was going to have to be similar to that of a large American state. This has not happened. As noted in Table 1, its recent budget deficits have been upwards of 2% to 3% of GDP. No state in the United States has had this fiscal experience (most have constitutionally mandated balanced budgets). If they had, there is little doubt that they would have had a problem marketing their state debt.

The continuation and worsening of the budget deficit and the growth of the national debt appear to give rise to the expectation that Argentina will be unable to achieve fiscal balance in the foreseeable future. This fuels speculation that it will be forced to default on its debt. The Argentine government has had great difficulty rolling over its maturing debt and has been forced to pay upwards of 14% interest to get the public to renew maturing issues.<sup>10</sup> It does not take long for interest rates of this magnitude to make a major contribution to any fiscal imbalance and make a debt default a real possibility.

## The Consequences of the Monetary Regime

Argentina adopted a currency board and fixed its exchange rate to the dollar in order to bring to an end its chaotic history of high inflation. As noted above, this objective has been achieved. But did this medicine come with adverse side effects? A compelling case can be made that it did.<sup>11</sup> In particular, it can be argued that the basic, if not the only, mechanism within the current monetary regime that is available to deal with negative economic shocks is *deflation*. That is, in the face of a negative shock, money wages and prices must fall *absolutely* to restore full employment. Why is this so?

When Argentina adopted a currency board based on the dollar, it placed itself in the position of a U.S. state such as Wisconsin or California. Common consensus holds that America as a single currency area works quite well in the sense that output in the United States has, for substantial periods, been able to grow along a full employment path or, at least, experienced long periods of positive growth. Indeed, the period from 1995 through mid-2000 was quite spectacular. GDP growth was high and the unemployment rate fell to a 30-year low. All parts of the United States enjoyed this prosperity. Argentina did not. Its GDP contracted 3.4% in 1999 and another 0.5% in 2000. The contraction appears to be continuing in 2001 although data are not yet available to measure the extent of the fall. Its unemployment rate has also risen.

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<sup>10</sup> At the Treasury auction held on July 10, 2001, the Argentine government paid 14% on \$827.7 million of 3-month bills and 15.96% on \$22 million of one year bills (these were peso denominated securities). See Jonathan Fuerbringer. Economic Troubles Worsen in Argentina. *New York Times*. July 11, 2001.

<sup>11</sup> The discussion to follow draws heavily on literature related to "The Theory of Optimum Currency Areas." The seminal paper in this literature, cited in the award of the Nobel Prize in Economics to its author, is Robert A. Mundell. A Theory of Optimum Currency Areas. *American Economic Review*, vol. 51, September 1961, pp. 657-665.

Why did Argentina fail to prosper as did the American states? There are mechanisms that make the American currency area work smoothly that are not available to those countries that opt through currency boards or dollarization to join the area. It is worth a short digression to see what these mechanisms are for they bear on how Argentina got into its present dilemma, and whether dollarization is good for it or for any country.

## The American Currency Area

The United States is subject to a variety of economic shocks that affect both demand and supply. These shocks do not always affect the entire country uniformly. Some are specific to an industry, sector of the economy, or geographic region. To see how America deals with these shocks, consider a case in which the American public suddenly prefers to own foreign cars (a change in taste). The public switches from buying U.S. cars to foreign cars. Economic theory predicts several consequences from this shift. On the aggregate level, a trade deficit would tend to emerge. This would be eliminated through a depreciation of the dollar which would tend to stimulate additional exports and cause some Americans to switch expenditures from imports to domestically produced substitutes. These additional purchases would tend to be spread across the economy and would be unlikely to offset the decline in U.S. car sales and output and the increase in unemployment in the automobile industry. Moreover, the automobile producing areas of the country would undoubtedly suffer a “trade deficit” with the rest of the country. If wages and prices were completely flexible within the U.S., car prices would fall, as would wages, until the unemployment was eliminated. This would also tend to eliminate any regional trade deficit. However, this adjustment would be unlikely to happen because wages and prices display substantial downward rigidity in the short run. Other factors or mechanisms would come into play to reduce unemployment and deal with the regional trade imbalance that can be regarded as substitutes for wage and price adjustments.

First, the financial system in the United States is highly integrated, meaning that many stocks and bonds are highly substitutable in the portfolios of financial institutions (including banks) and private individuals. This substitutability is aided by the fact that many of these assets can be sold in national markets to which financial institutions and individuals have ready access. Thus, if a region has a trade deficit, the banks in that region can finance it by selling their assets. If the adverse shock is transitory, financing a trade deficit is an effective substitute for wage and price decreases. A highly integrated financial market also has the advantage that monetary changes engineered by the Federal Reserve will be felt throughout the U.S. A common pattern of interest rates will also prevail throughout the American economy (or currency area). Financial integration is encouraged by a common legal system.

Second, and arguably, the most important way that regional imbalances are adjusted in the United States, is for labor and capital to move from areas where demand for them weakens to areas where it is stronger. And it is this “factor mobility” which tends to iron out regional imbalances. In the example above, this means that unemployed automobile workers would move to other industries or parts of the country where demand is stronger (in export or other import competing

industries). U.S. labor has shown itself to be highly mobile and this mobility is aided by a common legal system and language and such things as portable pensions.

Third, fiscal policy in the United States can be used as a means for automatically transferring income to regions hit by adverse shocks. The federal government has historically targeted various pockets of high unemployment for special treatment. For example, the duration during which unemployment benefits have been paid has been extended and the formulas for allocating and/or triggering federal expenditures often contain an unemployment rate component. Federally funded job retraining is also available. Moreover, such programs as farm price supports and social security help maintain a net income flow into adversely affected areas. Should the shock be economy wide in its effect, federal tax cuts or expenditure increases have also been used to reduce unemployment. This type of fiscal expansion can actually have a negative effect on countries who link their currencies to the dollar. This occurs in the following way. Fiscal expansion tends to raise U.S. interest rates. In an open economy, with international capital flows that are sensitive to interest rate differentials, an increase in U.S. interest rates will draw in foreign capital and this will lead to a stronger dollar (the dollar will appreciate). Dollar appreciation will then lead to a larger trade deficit and it will also have a negative effect on demand in countries whose currency is linked to the dollar as the foreign price of their goods and services increases to reflect the stronger dollar.

Finally, monetary policy can be used for shocks that are spread across the whole economy and this is an advantage of a central bank monetary regime.<sup>12</sup> Interestingly, monetary expansion in the United States will be felt in those countries whose currency is linked to the dollar even if the financial systems of those countries are not integrated with the U.S. financial system. This occurs through the effect of changes in U.S. interest rates on the international flow of capital and the exchange value of the dollar. To the extent that this effect is strong, it places a premium on countries having business cycles that are synchronized with U.S. cycles. If they tend not to be, U.S. monetary and fiscal policy could destabilize these countries.

When Argentina linked the peso directly to the dollar, it could not avail itself of these mechanisms that tend to substitute for wage and price rigidity to ameliorate negative shocks. For example, the Argentine and U.S. financial systems are not highly integrated. Many of the assets owned by Argentine banks and other financial institutions are not saleable in the United States and, hence, cannot be used to finance

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<sup>12</sup> It should not be overlooked that the case for a single currency area is strengthened if the trade in that area is largely internal. Dividing such an area into subareas linked by floating exchange rates brings with it an element of exchange rate instability which, in turn, leads to price level instability. And price level instability tends to discourage the use of money and for that reason leads to inefficiency in exchange. Trade within the U.S. economy is largely internal even though the U.S. economy is becoming increasingly open. For example, during the 1960s, the sum of U.S. exports and imports as a percentage of U.S. GDP varied between 8% and 10%. During the 1990s, this had increased to 20% to 25% of GDP. Very little trade takes place between Argentina and the United States. In 1999, imports from and exports to the U.S. were, respectively, about 1.8% and 1.0% of Argentine GDP. Thus, the case for a fixed exchange rate between the two countries, viewed from the perspective of the theory of optimum currency areas, is weak.

an Argentine trade deficit. Recent data suggest that Argentine liabilities to American banks are only \$11 billion. The unemployed in Argentina are not free to move to America (this is not true for Argentine capital) because of immigration controls. The U.S. Congress is unlikely to target American fiscal policy on problem areas in Argentina. Finally, Federal Reserve policy is geared to economic conditions in the United States, not to those in Argentina. To the extent that the business cycle in Argentina in terms of type, periodicity, and magnitude, is different than in the U.S., both U.S. fiscal and monetary actions could actually destabilize Argentina.

Since these ameliorating substitutes are unavailable to Argentina, negative shocks to the Argentine economy must be dealt with primarily by wage and price deflation. And this is the specter that now faces Argentina. It is the consequence of having fixed its currency rigidly to the dollar.

## The Shocks to the Argentine Economy

The Argentine economy has over the past 5 years been affected to one degree or another by four external shocks: the rising value of the dollar, higher U.S. interest rates, falling prices for its exports, and a devaluation and subsequent depreciation of the currency of its leading trading partner, Brazil. A discussion of each follows in order to demonstrate how the Argentine economy has had to adjust to each shock.

### Dollar Appreciation

Between mid-1995 and 2001, the dollar rose in real or inflation adjusted terms by about 33%.<sup>13</sup> It is widely acknowledged that the appreciation was due in large measure to the desire by foreigners to buy American assets. To do so, they bought dollars. This increase in demand raised the price of the dollar and this, in turn, led to a trade or current account deficit. The trade deficit was the means by which foreign capital (or the inflow of foreign saving) came to the United States.<sup>14</sup> Dollar appreciation has caused a problem for some American industries (primarily those producing exports and substitutes for imports). Offsetting this have been the lower interest rates (lower than they would otherwise have been) made possible by the inflow of foreign capital and this has expanded the demand for the output of other American industries. Overall the net effect on the United States economy has been small because as the trade deficit grew, the American unemployment rate fell.

The effect of dollar appreciation on Argentina, however, has been substantial. The rising value of the dollar has had the same effect on Argentine export and import competing industries that it had on similar industries in America. But because the

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<sup>13</sup> As measured against 26 currencies of the leading trading partners of the United States on a trade weighted basis as compiled by the Board of Governors of the Federal Reserve.

<sup>14</sup> For a more comprehensive discussion of the cause of the U.S. trade deficit, see CRS Report RL30534, Marc Labonte and Gail E. Makinen. *America's Growing Current Account Deficit: Its Causes and What It Means for the Economy*.

financial systems of the two countries are poorly integrated, the relatively lower interest rates the capital inflow made possible in the United States were not experienced to the same degree in Argentina.<sup>15</sup> Argentina was left with a trade deficit that it had to finance by borrowing abroad and losing dollar assets held by its currency board. This put deflationary pressure on Argentina. To some degree the Argentine government tried to deal with rising unemployment by running a fiscal deficit. It would appear, however, that it hoped that the rising unemployment would lead to a fall in wages and prices so that Argentine goods would once again be competitive in world markets. Falling prices are a sign that this part of the adjustment mechanism is working. Notice that the mechanisms that substitute for deflation are not working for Argentina. The unemployed in Argentina cannot move to the United States and the U.S. Congress does not consider them in making fiscal policy.

## Rising U.S. Interest Rates

The United States enjoyed a robust, booming economy during the last half of the 1990s. The boom featured a substantial rise in productivity that increased the real rate of return on capital. This, in turn, increased investment and led to higher interest rates. In addition, the Federal Reserve raised interest rates between mid-1999 and mid-2000 in an attempt to reign in the boom lest the economy overheat.

These interest rate increases were felt directly to some degree in Argentina even though the financial markets of the two countries are not highly integrated. And they were indirectly felt through the effect these interest rate hikes had on the appreciation of the dollar. In addition, following the Asian crisis, investors demanded higher interest rates for lending in emerging market countries. In part this was to compensate for additional fears of default and currency devaluation. And these interest rate increases, by decreasing spending on capital goods, only curbed aggregate demand growth in Argentina – they were, in effect, another negative economic shock.

## Falling Prices of Exportables

Commodities are an important component of Argentine exports and commodity prices took a tumble on world markets during the late 1990s as world demand declined following the Asian crisis.<sup>16</sup> If Argentina had a floating exchange rate, its currency would have depreciated to smoothly transmit this fall in world demand and prices to the Argentine economy. Since this channel is not available under a currency

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<sup>15</sup> Financial integration has a number of attributes. It can be affected by law, administrative procedures, inability to adequately assess risk in lending to foreign countries, etc.

<sup>16</sup> This shock must be thought of as separate from the shock that came from dollar appreciation. The latter would have been spread across all Argentine exports. This shock only applies to raw material exports and should, more appropriately, be thought of as a negative terms-of-trade effect. That is, the fall in commodity prices means that Argentina must now give up more exports for each unit of imports. In effect, commodity prices got a hit by a double shock.

board, Argentine prices and wages must fall. Since price stickiness prevents this in the short run, Argentina faces recession and unemployment. This fall in commodity prices did exert a small downward pressure on the exchange value of the dollar, however, because it reduced world demand for dollars. Little of this benefitted Argentina because it is a relatively small part of the overall output of the dollar currency area. Thus, the decline in Argentine export earnings would not have been matched by a commensurate fall in outlays for imports. As a result, Argentina was faced with a trade deficit that had to be financed. Some of the deficit was financed by the sale of currency board assets and this put additional deflationary pressure on Argentina (another source of financing was borrowing abroad).

## The Devaluation and Subsequent Depreciation of the Brazilian Real

Brazil is the largest trading partner of Argentina. Over the period 1993-1999, about 25% of all Argentine exports were destined for Brazil. These exports averaged about 2% of Argentine GDP. The exchange rate between the two countries is thus important to trade and Argentine income growth. For a number of years in the 1990s the exchange rate between the two countries was fixed. Because Brazil had a higher inflation rate than Argentina, the fixed nominal exchange rate between the two countries implied a real rate that gradually cheapened Argentine products in Brazil and priced Brazilian products out of the Argentine market. In January 1999, in the face of capital flight, Brazil devalued its currency, the *real*, and then let it float against all currencies. The devaluation and subsequent depreciation more than compensated for the differential rates of inflation in the two countries.<sup>17</sup> In inflation adjusted terms, Brazilian products now became relatively cheaper in Argentina and the latter's goods became expensive in Brazil. This would put downward pressure on Argentine export earnings and tend to increase outlays for imports. As a result, it would tend to aggravate any existing trade deficit and this had to be financed. Again, the loss of currency board reserves would put downward pressure on money spending and this reduced output and caused unemployment to rise.

These four external shocks have had a major deflationary effect on the Argentine economy. Between 1995 and 1997-98, the deflationary pressure from the balance of payments deficit was masked or offset by the ability of Argentina to borrow abroad. Foreign capital did come to Argentina. This came to an end with the East Asian financial crisis of 1997 and the Russian default in the summer of 1998. Foreign lending to Argentina dried up and the full deflationary effects of these shocks tended to be felt. Because nominal wages and prices in Argentina have shown marked downward rigidity, the initial response to deflation has been falling output and rising unemployment. Argentina has been thrown into a recession.

It is not always clear why currencies become vulnerable to speculation. The Argentine peso has come under speculative attack several times over the past few

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<sup>17</sup> After devaluation in 1999, the *real*, like other currencies, depreciated against the dollar and, hence, against the Argentine peso. At this point, the discussion above on **dollar appreciation** becomes relevant.

years, most recently late in 2000. Undoubtedly, one factor influencing speculators is how long the continued policy of deflation will be politically acceptable. The longer it continues and the higher the unemployment rate climbs, the more reasonable is the view that politicians will bring the deflation to an end with a currency devaluation, i.e., that the peso/dollar exchange rate will be changed. This will invite speculation.

## **Argentina's Solution to Its Economic Problems**

Argentina has two economic problems to deal with: macroeconomic instability characterized by falling income and rising unemployment and a growing national debt. These problems are not separate, but inter-related. Falling income has increased the fiscal deficit and this has increased the national debt. Argentina has responded both actively and passively to these problems.

### **Macroeconomic Instability**

Argentina has faced the contraction of income and the rise in unemployment in three ways. First, it has allowed its fiscal deficit to grow. Its fiscal behavior, unlike that of any state in the United States, has given rise to a fear that the government will have to default on its debt. Second, since the exchange rate has not been changed, Argentina must hope that the fall in income and rise in unemployment will put downward pressure on wages and prices. If wages and prices fall enough, exports will again become competitive and the people of Argentina will buy cheaper domestic substitutes for imports. Both of these will expand domestic demand. Of course, downward rigidity in wages and prices could make this a prolonged process. A more activist policy has also been pursued.

In December 2000, legislation was passed to alter the currency board arrangement. The law now specifies that when the euro and the dollar reach parity, the Argentine peso will be pegged to both currencies. The intent of the legislation is to curb any tendency of the peso to appreciate as it has when pegged only to the dollar. Since this scheme has not yet come into effect, an evaluation of it is confined to the Appendix.

To expand demand, the government in March of 2001 unveiled a scheme to subsidize exports and penalize imports. To this end, it rewards each dollar earned abroad by exchanging it for 1.07 pesos. Dollars to be spent abroad for imports can be acquired only by paying 1.07 in pesos. While this may have a small effect on the trade deficit, it is a very inefficient way to stimulate demand, as it will lead to all sorts of devices to make it appear that dollars were earned abroad and few dollars are to be used to acquire imports. Multiple exchange rate schemes have a dismal record for accomplishing any macroeconomic goals. Instead, they have a good record in encouraging criminal behavior.

## Debt Buildup

The approach to the debt problem has been different. Until recently, there was much debate in the government about reducing the budget deficit, the source of the increase in the debt. Very little happened as the political factions could not agree on the distribution of the burden inherent in deficit reduction. The required reduction grew quickly as interest rates rose. Thus, the debt continued to grow. This changed dramatically in July 2001 when the government committed itself to the zero deficit plan. Nevertheless, the government has been faced with the problem of rolling over the existing debt and finding new lenders to acquire the new debt. The existing debt is denominated both in pesos and several foreign currencies such as dollars, euros and yen. One approach was to try to lengthen the maturity of the debt coming due thus postponing the problem to a future day. Finding new lenders, especially foreign, to acquire a growing debt posed additional problems. Some observers point out that Argentina is unlikely to acquire a balance of payments surplus in the foreseeable future. Thus, it is unlikely to have the foreign exchange to service the debt denominated in foreign currencies. This increases the chance of default and increases the reluctance of foreigners to buy Argentine debt. An additional approach is to line up lines of credit with such international lending institutions as the International Monetary Fund (IMF), foreign governments, and various international banks. The most recent effort by the government to deal with the debt was in December 2000. A \$39.7 billion support package was provided by the IMF, the Inter-American Development Bank (IBD), the Spanish government, and other lending institutions. It includes a \$13.7 billion line of credit from the IMF, \$5 billion in loan commitments from the World Bank and IBD, and \$1 billion from the Spanish government. The remainder consists of nonbinding commitments from Argentine banks and foreigners to roll over their existing loans.<sup>18</sup> About \$25.4 billion of the \$39.7 billion support package will be available by the end of 2001, which covers almost all of Argentina's debt payment requirement for that year.<sup>19</sup> Other negotiations have continued throughout 2001 aimed at debt extension and additional support. While these aid packages can help alleviate the funding burden temporarily, they do nothing to alter the effects of the four external factors that caused Argentina's current macroeconomic predicament.

## Policy Options for Argentina's Macroeconomic Problems

Two options to lift Argentina out of the economic doldrums have been proposed: depreciating the peso by changing the exchange rate to the dollar and replacing the currency board by formally adopting the dollar as the legal tender of the country. Both of these medicines come with potentially serious side effects.

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<sup>18</sup> See Washington Post (Dec. 19, 2000, pp. E1-2) and the IMF Statement (Dec. 18, 2000).

<sup>19</sup> The Economist Intelligence Unit Ltd., *Argentina Economy: \$39.7 Billion International Aid Package*, Dec. 12, 2000.



## Changing the Exchange Rate

Argentina has always had the option of changing its exchange rate rather than deflating its economy in response to an appreciating dollar. Thus, it could for example give 1.5 pesos for each dollar and this would cheapen its goods abroad and increase the price of imports in Argentina. This would increase the sale of exports and cause individuals in Argentina to switch from buying imports to substitutes produced in Argentina. Both would increase demand in Argentina and put people to work (reduce unemployment).

While the solution sounds simple, it does not come without major costs. First, it would remove the credibility of the fixed exchange rate as a constraint on inflation. Individuals would reason that if the rate could be changed once, it could be changed again and again. In effect, Argentina could be back in the old inflation cycle and this could undermine the desire of foreigners to invest in the country. Second, and more important, devaluation could wreck havoc on the financial system. This is because Argentina has become increasingly dollarized since the 1991 reform. Banks, for example, have substantial dollar liabilities. If the peso were devalued, the peso value of those liabilities would rise. Account owners could withdraw substantially more pesos after devaluation than before. Where could the banks obtain these additional pesos? If their assets were denominated in dollars, they might be able to force those who owe these assets to pay more in pesos (for example, homeowners could find themselves with larger mortgages). If not, the banks would be in serious difficulties. And this is also true for other financial institutions. Thus, changing the exchange value of the peso to the dollar to stimulate demand is likely to run the risk of wrecking financial ruin on the financial system. It may be for this reason that there is not much support for this option in Argentina even among the opposition parties.

## Dollarization

The Argentine economy is now heavily dollarized. U.S. currency circulates widely in the country. All of the peso denominated currency is effectively backed by dollar denominated assets. About two thirds of all bank accounts are expressed in terms of dollars. The only thing that is lacking from complete dollarization is that the U.S. dollar is not legal tender in Argentina. Those who advocate dollarization do so on the grounds that it would lower real interest rates in Argentina and this would encourage spending by consumers and businesses on such things as durable goods and housing. They cite as evidence the fact that yields on Argentine government debt are higher than on comparable U.S. Treasury debt. The yield differential, they argue, is due to two factors: fear of debt default and fear that the peso/dollar exchange rate will be altered (i.e., the peso will be devalued). The yield differential is held to compensate for these additional risks. While this argument has some merit, it is based on the questionable proposition that if these risks were not present, the yield on comparable Argentine and U.S. Treasury debt would be the same. For this to be true, the financial systems in both countries would have to be highly integrated. And this is simply not the case. Thus, the argument neglects the fact the Argentina is currently financing a growing budget deficit while the U.S. has been disposing of a budget surplus. However, if the exchange rate risk is important, dollarization could reduce

real interest rates. It should not be forgotten that dollarization would bind Argentina more completely to U.S. currency than does the present currency board and, like the latter, Argentina would continue to be excluded from the cushioning effects that moderate the recourse to deflation that U.S. states enjoy to deal with macroeconomic imbalances.<sup>20</sup>

There is one tangible benefit that might come from dollarization. Since there would no longer be any risk of devaluation, it might stop, if not reverse, any capital flight from Argentina that has occurred.

All agree, however, that there is one shortcoming of dollarization: the government would forgo the seigniorage (or profit) that it currently gets from the currency board system.<sup>21</sup> To minimize this loss, Argentina might be able to negotiate a treaty with the United States to give it the seigniorage accruing to the dollars circulating in Argentina. If that is not possible, the loss of seigniorage, it is argued, is a small price to pay for the gain in demand stimulus that should come from lower interest rates.<sup>22</sup>

## Summary and Conclusions

Argentina decided in 1991 that a chronic tendency to inflation was harmful to economic growth and well being. To achieve price level stability, the government rigidly fixed the exchange rate of the peso to the U.S. dollar and, to control the money supply, adopted a currency board to replace the largely discredited central bank regime. Under a currency board, the peso currency is backed 100% largely by U.S. dollars. With a minor exception, new peso currency can be issued only if the currency board acquires an equivalent sum of dollars. While checking accounts and other bank deposits are not backed 100% by dollars, the fact that they are convertible into peso notes constrains the ability of banks to supply them.

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<sup>20</sup> Recently provincial governments in Argentina have taken to issuing their own “money” in the form of interest-bearing notes which they pay to civil servants and others who supply services to the government. In some cases these notes are legal tender. They are similar to scrip issued by municipalities in the United States during the 1929-1933 depression. In the 1990s, the state of California resorted to a similar experiment when it ran out of funds. It is well to remember that the issuing authorities get only a short term gain from this expedient. When the scrip is returned in the payment of taxes or other dues, it provides no revenue to the issuing government. For a discussion of this development, see Anthony Faiola, “Hard Times Tarnish a Sterling Symbol,” *Washington Post*, August 30, 2001.

<sup>21</sup> Seigniorage is the profit that government gets from issuing money. Under the currency board system, seigniorage is represented by the income the currency board derives from the assets it holds as backing for the peso. If the peso were abolished and Argentina adopted the dollar instead, the seigniorage would accrue to the United States.

<sup>22</sup> Omitted from this list is the hope that the Federal Reserve continues to lower interest rates in the United States. Even though the financial markets of Argentina and the United States are not well integrated, lower rates are better for Argentina than higher rates. At least they may bring about some depreciation in the value of the dollar.

With this new monetary regime, Argentina achieved price stability, if not deflation. This medicine did not come without side effects. The most important of them is that the road back to full employment in the presence of negative economic shocks is largely through deflation or absolute declines in wages and prices. This occurs because the monetary regime makes Argentina a part of the U.S. currency area and the mechanisms that enable the U.S. to cope with such shocks are, in general, not available to Argentina. These include flexible exchange rates, monetary policy of the Federal Reserve, federal fiscal policy, the highly integrated nature of the U.S. financial system, and the ability of Americans to migrate freely from areas and industries where demand is weak and unemployment high to areas and industries where demand is stronger and unemployment lower. In addition, a great deal of U.S. trade is internal and this strengthens the case for a common currency area. U.S.-Argentine trade is very small and this strengthens the case for linking the two countries by flexible exchange rates.

In the second half of the 1990s, Argentina was hit by four negative external shocks: the appreciation of the dollar, high real American interest rates, the fall in the price of the Brazilian *real*, and the decline in price of raw materials. Because the adjustment mechanisms integral to the U.S. system are not available to Argentina, the country has been forced into a serious contraction of income and an increase in unemployment. The decline in the price level during the past 2 years is the primary way Argentina has to restore income, trade, and employment.

In addition, the new monetary regime has placed a major constraint on Argentine fiscal policy. Argentina should have conducted its fiscal policy as if it were another U.S. state. This it has failed to do and the long string of fiscal deficits has greatly added to the country's national debt. The prospect that it can service this debt or will attempt to get out of its economic problems by altering the peso/dollar exchange rate has led to speculation against the peso.

Argentina has dealt with its macro problem by running a budget deficit, subsidizing exports and taxing imports. The exchange rate of the peso has been linked to both the dollar and the euro, but this will only come into effect when the linked currencies reach parity with each other. Its debt problem has been dealt with by efforts to lengthen its maturity (postpone the problem) and borrow from a variety of international agencies to meet maturing obligations. Recently, discussions have centered on dollarization as a way to reduce domestic interest rates. Some have proposed that the peso/dollar exchange rate be altered. Both of these solutions have inherent problems.

## Appendix: The Dual Currency Board

When Argentina set up its currency board, it linked the peso only to the dollar as its reserve currency. This exposed Argentina to all of the shocks that affect the international exchange value of the dollar. Of particular importance has been the strong appreciation of the dollar in the period since 1995. This appreciation has had a major deflationary effect on Argentina. To prevent this from happening in the future, Argentina decided to reduce its dependency on the dollar as a reserve currency by linking the peso to both the dollar and the euro. The change will take effect whenever the euro reaches parity with the dollar on the international exchange markets. At that point, the peso will be set equal to one dollar or one euro. That is, the holder of an Argentine peso will be able to go to the currency board and exchange it for either a dollar or a euro – one for one. This shift to dual currencies, while conceptually simple, accomplishes quite a number of changes. To make the following discussion manageable, the operation of the system will be described first.

To see how the new system works and how it avoids the shock that comes from appreciation of a single reserve currency, assume that the euro reaches parity with the dollar and that on that date, the Argentine currency board converts half of its dollar assets into euros (the proportion converted into euros is immaterial to the example). Further, assume that shortly thereafter, for some reason, the dollar suddenly appreciates such that in the market, one dollar exchanges for 1.5 euros. Since the market ratio now deviates from the currency board ratio, it becomes profitable for individuals (including the currency board) to engage in arbitrage. In this instance, individuals would take pesos to the currency board, exchange them for dollars and sell the dollars for euros in the market. The euros would then be taken to the currency board and converted into pesos on a one-for-one basis. The net result is a .5 euro profit for each peso purchased.<sup>23</sup> This could continue until the currency board is stripped of all of its dollar assets.<sup>24</sup> At this point, its assets would all be denominated in euros. (Nothing would prevent the currency board itself from doing the same thing.)

Once the currency board no longer holds dollars, the Argentine peso would only be convertible into euros, the depreciated currency, and no one would have any incentive to bring dollars to the currency board for conversion into pesos (because the currency board undervalues the dollar). In effect, the Argentine peso is linked only to the euro and it becomes the sole reserve currency. Of great importance, the prices of Argentine goods and services will not effectively rise in terms of the euro even

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<sup>23</sup> Those familiar with monetary history will recognize this situation as analogous to that occurring from the operation of a bi-metallic monetary standard in which both gold and silver money are used and the official or mint exchange ratio of the two currencies deviates from that dictated by the market.

<sup>24</sup> Essential to this discussion is that the currency board runs out of dollars. Notice that by supplying dollars for euros, the currency board's action tends to drive the market exchange ratio back to the currency board ratio. If this occurs before the currency board loses all of its dollars, then the discussion to follow in the text will not occur.

though the dollar has appreciated.<sup>25</sup> In fact, not only will the appreciation of the dollar not have a negative effect on the Argentine economy, it will actually stimulate demand for Argentine goods and services.

To see why this is true, consider the case of an Argentine good that costs 100 pesos. As the dollar appreciates, the market price of the good might be expected to rise to 150 euros and this should discourage individuals in the euro area (or any other country whose currency rises in value with the dollar) from purchasing the good (the essence of the exchange rate shock). However, this won't happen. The euro price of Argentine goods will not rise because the currency board will still convert euros into pesos on a one-for-one basis. Since the price of the good in Argentina remains 100 pesos, it only costs 100 euros to the purchaser in the euro area for with 100 euros, 100 pesos can be obtained from the currency board. Thus, the appreciation of the dollar does not translate directly into an increase in Argentine prices for those holding euros. Hence, with a dual currency board, an appreciation of the dollar (or the euro) would impose no adverse shock on Argentina. Quite the contrary. The appreciation of the dollar will stimulate demand for Argentine goods for all dollar holders (and for those in countries whose currency has risen in value with the dollar) since in the market, one dollar will now command 1.5 pesos and the peso price of Argentine goods will fall in terms of dollars (and for all other currency holders whose currency rises in value with the dollar).<sup>26</sup> Should the reverse occur, and the market exchange value of the euro rise above the dollar relative to the currency board ratio, the currency board would be hit by the opposite phenomenon and its assets would tend to shift from being all euros to all dollars.

The analysis above suggests that despite having a dual currency board, the Argentine peso is likely to be linked to either the dollar or the euro, but not to both simultaneously, for the market ratio of the two currencies is seldom going to be the same as the currency board ratio and the assets of the currency board are unlikely to be large enough to make this possible. Thus, shocks that lead to an appreciation of one or the other of the two reserve currencies will expand demand in Argentina, not cause it to contract.

Another implication of the dual currency board system is that Argentina will switch from being in the dollar area to being in the euro area every time the peso becomes linked only to one currency. While the theory of optimum currency areas suggests that Argentina should not be linked to the dollar, it may not be true for the euro. The euro area is, for example, Argentina's second largest trading partner. Thus, there may be a number of efficiency losses when the peso link is forced from one currency to the other and then back again as the market ratio of the two currencies departs from the currency board ratio.

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<sup>25</sup> This is also true for all currencies whose exchange rate for the euro remains unchanged during the period of dollar appreciation.

<sup>26</sup> Of course, the increased demand for Argentine goods and services is likely to put upward pressure on their peso prices. Domestic price increases should be expected to affect demand both domestically and internationally.

Does this change to a dual currency system come with any other adverse side-effects? It may. First, shocks to the dollar or the euro are unlikely to coincide with the Argentine business cycle. By having a link to two currencies, Argentina may be exposing itself to many more shocks than if it was linked to only one currency. While this could be stabilizing, it is more likely to be destabilizing. Second, the currency board is likely to hold very short term assets to facilitate the shift in preferences between the dollar and the euro whenever the market exchange rate deviates from the rate set by the currency board. Since short term assets typically yield less than longer term assets, this arrangement is likely to reduce the seigniorage earned by the currency board. It is conceivable that the currency board would yield no seigniorage at all.<sup>27</sup> Third, the dual system may discourage foreign investment in Argentina. Would international investors want to invest either dollars or euros in Argentina when there is some probability of being paid in a depreciated currency when the time comes to repatriate either the principal or earnings? This would add an additional element of risk to the investment and require some additional interest to compensate for it. Similarly, Americans may be less eager to trade with Argentina since they may not know if their transactions will be settled in dollars or euros. Fourth, the dual system could discourage international contracts for at least one of the parties could be in the position of not knowing what the contract would cost. This will not be a problem as long as the market ratio and the currency board ratios are the same. When they are not and the peso shifts from being pegged to one to the other, the cost of the contract could become greater or less than intended.

Thus, while the dual currency board may shelter Argentina from adverse shocks due to an appreciation of a single reserve currency, it is a medication that does not come free of adverse side effects, some of which may be serious.

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<sup>27</sup> The reader may wonder if the currency board will suffer a loss each time individuals shift from wanting to hold dollars or euros or vice versa because the market exchange rate deviates from the currency board rate. A simple answer is “no” in an accounting sense. The assets of the currency board are always valued in Argentine pesos at the currency board exchange rate of one-to-one. Thus, no matter whether the assets are all dollars or all euros or some combination of the two, they are always converted into pesos at a one-for-one rate. Losses could be incurred if the assets were to be valued in terms of the market ratio of the two currencies, but this is not how it is done. A more sophisticated answer, however, is that losses (or gains) are possible as the assets are shifted from those denominated in one currency to the other. This depends on the relationship of the interest rates that prevailed when the assets were acquired versus those prevailing when they are sold. Should the rates rise, losses could be incurred. Should the rates fall, gains could be made.