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Economic Watch

Chile

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Economic Analysis

Chile Unit

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Low pass-through to inflation

But not low enough to get inflation below 3% if CLP goes up over USD575 in the short term

- **We are reviewing our estimate of the exchange-rate pass-through to headline inflation,** which, in the economy's current cyclical position, we are estimating around 7% on a one-year horizon. That is, a depreciation of 20% would lead to 1.4% more inflation.

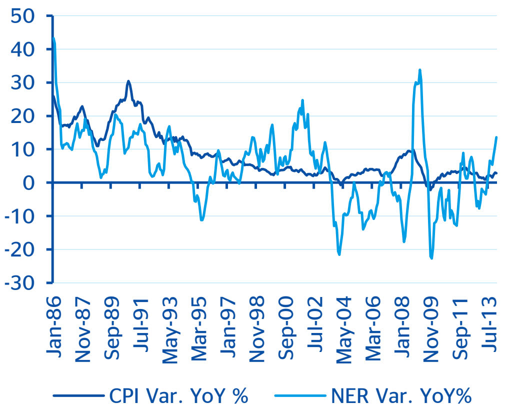
- **In its next Monetary Policy Report, the central bank will have to correct to the upside its inflation forecast to December,** but it would stay under 3.0% in a scenario in which the exchange rate continues fluctuating around $550.

- **Scenarios in which the exchange rate maintains its downward bias, and goes up to levels of around USD570-580 in the short term, would take inflation to the end of the year slightly above 3%,** in which case the central bank would prevent any additional cut to the reference rate.

In periods of exchange rate depreciation, such as the one we are going through, an issue which becomes relevant when discussing the situation is the so called pass-through of the increase in the exchange rate on domestic prices. This pass-though is variable in time and depends in the short term on what stage of the cycle the economy is at and, in a longer perspective, on the credibility of the inflation targets system, which in our country has its basis in an independent central bank and a floating exchange rate system. These factors are amply documented and, in the case of our economy, there is evidence of a notable drop in the exchange pass-through rate between the second half of the nineties and the mid noughties[1].

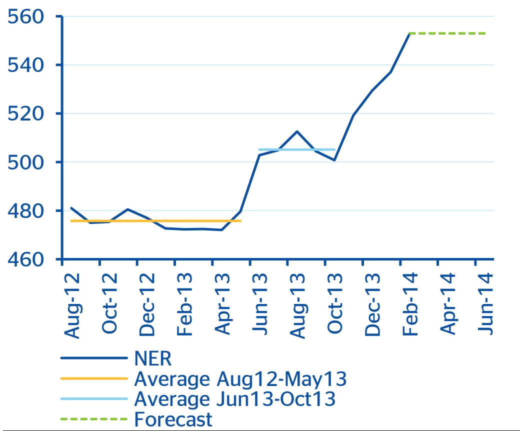
After the economic crisis of 2009, the continued existence of an exchange rate appreciated in historical terms took the spotlight off the value of pass-through in economic debate, but this subject has become relevant once again in the context of the peso depreciation we have been witnessing since the second half of 2013, and the inflationary uptick this has brought with it (Chart 1). In Chart 2 we can clearly see how exchange depreciation occurred in two phases: until May 2013 CLP value was moving around CLP476 per dollar; however, after the first depreciatory episode, it started fluctuating around $505 per dollar between June and October, which is the equivalent of a 6.2% increase. In February 2014, the exchange rate was quoting at around CLP553 per dollar, a figure which if it holds, is the equivalent of a further 9.5% depreciation. In short, the exchange rate depreciation between CLP476 and CLP553 is equivalent to a total depreciation of 16.2%.

Chart 1
Depreciation of the nominal exchange rate and inflation,%



Source: BCCh, BBVA Research

Chart 2
Nominal exchange rate (CLP per USD, monthly average)



Source: BCCh, BBVA Research

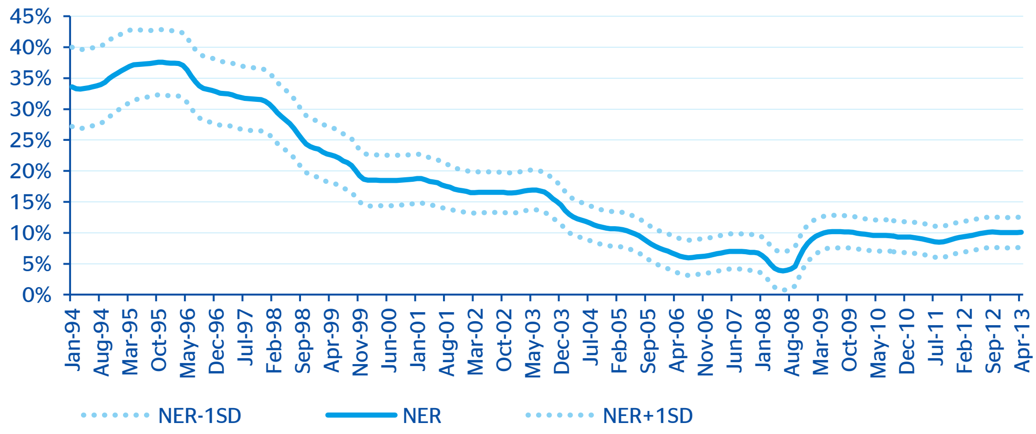
Together with this CLP depreciation, there have been noticeable price hikes in CPI products which are directly attributable to the exchange effect, amongst which are, for example, increases in fuel prices, new cars and tourism packages.

We updated the estimate of the pass-through parameter using a standard methodology in which we estimate an equation for YoY inflation depending on the YoY depreciation of the exchange rate and a linear trend. The parameter accompanying the exchange depreciation variable is estimated recursively, and is the one which detects the so-called pass-through. For this estimate we used monthly data from January 1986 to April 2013, so as to omit the most recent episode of exchange rate depreciation from the sample.

1: See García & Restrepo (2001). Price Inflation and Exchange Rate Pass-Through in Chile. Chile Central Bank. Working Document N° 128 & Banco Central de Chile (2005). Tipo de Cambio con Metas de Inflación en Chile: Experiencia y Temas de Interés. Documentos de Política Económica N° 14.

Chart 3 shows the results of this estimate. We can see how this parameter decreased persistently from values close to 35% in the middle of the nineties to values close to 10%, around which it has fluctuated in the last five years, and in April 2013 specifically, in a range between 7.6% and 12.5%.

Chart 3
Exchange rate pass-through to domestic inflation , %



Source: BBVA Research

This ratio can be interpreted fairly directly and indicates that, other things being equal, a 10% rise in the exchange rate – for example from CLP500 to CLP550– has a link with a rise in annual inflation of between 0.76 and 1.25pp. Taking these estimated values, Table 1 quantifies the impacts on inflation of the exchange rate depreciation we have been seeing since last year, separating the two episodes of CLP depreciation previously described. The first two columns in the table show the variation in the exchange rate by phases and the total depreciation. The subsequent columns show the estimated impact on inflation, including the minimum and maximum value constructed on the basis of +/- one standard deviation.

Table 1
Impact on inflation of exchange depreciation

NER Var.		Min	Pass-through	Max.
476-505	6.2%	0.47%	0,63%	0.78%
505-553	9.5%	0.72%	0.96%	1.19%
476-553	**16.2%**	**1.24%**	**1.63%**	**2.03%**

Source: BBVA Research

Considering the phase of the cycle through which the Chilean economy is passing, we think it is more appropriate to use the minimal pass-through estimate. The reason for this is that during the stages of economic growth slowdown, companies try to contain the effects of rises in the exchange rate on final prices by reducing margins or optimizing processes, so as not to impact their sales over and beyond what they are suffering as a result of lower demand.

Thus we estimate that the exchange rate move from CLP476 to CLP505 on average during June last year will inject 0.5pp into inflation YoY up until the first half of 2014. Moreover, the move from CLP505 to CLP553 that occurred between November 2013 and February 2014 will inject a further 0.7pp into inflation YoY over a 12-month horizon. So these two overlapping exchange rate rises in total have an effect on inflation of 1.2pp. As mentioned above, we are already seeing part of this increase in inflation, but the additional effect will continue to be seen throughout the year.

What is the implication of these effects on inflation projected to December 2014 and on monetary policy?

Let us recall that in last December's Monetary Policy Report, the central bank forecast that inflation would close this year at 2.5%, with an exchange rate which stood at CLP520 when the report's statistics were closed. Keeping the exchange rate at levels close to CLP550 is equivalent to between 0.4pp and 0.5pp of greater inflation in the year, according to the pass-through ratio estimated in this paper, taking us to levels of 2.9%-3.0% for the end of the year. However, we should remove the deflationary impact from the lower growth from 3.75%-4.75% to 3.5%-4.5%, which ought to have a negative impact, although a limited one, on estimated inflation for the year. If the scenario of an exchange rate around CLP550 is maintained, the central bank will revise inflation in December to values of around 2.8%-2.9% in its base scenario and in its next Monetary Policy Report, sustaining an additional cut of 25bp in the MPR to 4%.

However, scenarios in which the exchange rate keeps trending upwards, and sticks at levels of around CLP570-580 per dollar in the short term, could bring inflation to the end of the year above 3%, in which case the central bank will evaluate the option of not continuing to cut the reference rate and will wait to see the pass-through effects of these rises on exchange rates on domestic prices.

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