

PPP Special
(EMS and dollar)
August 1997

- *Dollar fairly valued*
- *Sterling 20% overvalued*
- *Guilder undervalued*
- *Irish punt candidate for revaluation*

PPP analysis: guilder undervalued; Irish punt candidate for revaluation

Eric Nienhuis
Tel. (+31 20) 527 1838

The financial markets have been considerably affected in recent months by widely fluctuating exchange rates. The yen recovered sharply, the dollar climbed to a five-year high against the D-Mark and the advance of sterling was absolutely spectacular. There has been a lot of hot air in Europe about the rise of the pound and the dollar, and about the weakness of the D-Mark. Italy felt obliged to help shore up the D-Mark by buying the German currency. Turbulence in the forex markets has already claimed its victims in Southeast Asia. Various countries were unable to continue to protect their currencies and had to accept a free float.

Tensions within ERM

Although no blood has so far been spilt in the ERM, the internal tensions have mounted sharply. The main divisive element is the Irish punt, which tends to follow the pound sterling. The gap between the strongest (Irish punt) and the weakest (French franc) currency in the ERM widened to more than 10% in July, the most this has been since ERM bands were increased to 15% in 1993. With EMU around the corner, this is not a good omen. It is likely that for practical and technical reasons members will want to join the euro at the central ERM rate. If that is impossible, then each country will have to be looked at individually to see whether a unilateral revaluation is feasible. A unilateral devaluation 'on its own initiative'¹¹, on the other hand, is in conflict with EMU criteria. For the sake of the future of the EMU it is to be hoped that exchange rate tensions ease off or become manageable in 1998, so that conversion can be set at the central ERM rate at the end of 1998.

1. Viable exchange rates?

The protection of exchange rates against speculative attack stands or falls by whether the market perceives the rates as viable. This applies particularly to euro conversion rates, which presumably, after being fixed at the beginning of 1998, will have to be defended until the end of that year. This will be a difficult task, particularly in view of the successful speculative forays on overvalued currencies that have sometimes occurred in the ERM's history. Apart from worries about speculation, the irreversible nature of euro conversion rates after 1999 is another reason to test whether the exchange rate of ERM currencies are credible. Any country that joins at a conversion rate that is not closely aligned to its economic fundamentals will have problems or benefits for a long time. This study, in order to arrive at viable exchange rates against the D-Mark, will analyse currencies according to Purchasing Power Parity (PPP)²¹. We shall thus analyse whether a country's competitiveness has changed in comparison with an — as neutral as possible — base year.

Insofar as data were available and appropriate, we have compared actual exchange rates against the D-Mark versus theoretical exchange rates based on inflation, GDP deflator and export price differentials with Germany. Headline inflation (according to OECD yardsticks) is the most frequent and the most suitable indicator for PPP analysis. Its limitation is that not all components (particularly non-tradables and government levies) affect competitiveness. The advantage of the GDP deflator is that it is less influenced than inflation by fiscal measures. The main problem with export prices is that they are not easily available for all countries. There is also the chance of a discrepancy between generic export prices and the bilateral

¹¹ Treaty of Maastricht, article 109j (1).

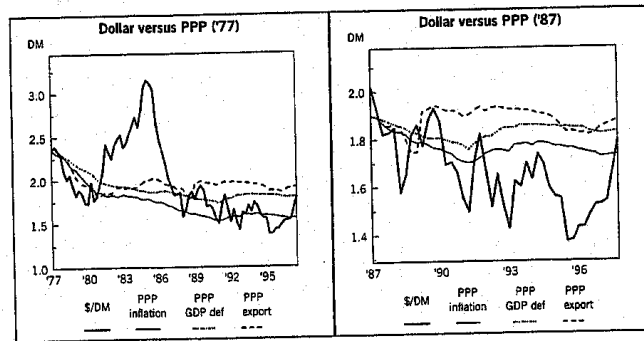
²¹ We use a slightly different approach here from the one in the "PPP Special" in *International Bond Markets* of November 1995.

exchange rate. However, we have treated export prices as the most reliable yardstick wherever these were available. Realising that any basis also has specific advantages and disadvantages, we ultimately opted for the average rates in 1977 and 1987. The first year, 1977, fell between two oil crises and was relatively quiet, while 1987 saw the last realignment of the ERM, initiating five years of relative calm. The Bundesbank also uses 1987 as its base year when computing effective exchange rates.

2. PPP analysis of ERM currencies and the dollar

This study focuses on the confrontation between the market rates of potential EMU members and their theoretical PPP value. PPP analysis for ERM countries has proven to be important as it has been used as a tool for ERM realignments in the past. Besides the currencies of these potential members, including the UK and Denmark, the dollar has also been looked at more closely. The great influence that the dollar is known to exert on various ERM currencies warrants a PPP analysis. We shall briefly discuss the various currencies with the aid of two graphs, one illustrating the confrontation between market rates and PPP rates with 1977 as the base year and the other with 1987 as the base year.

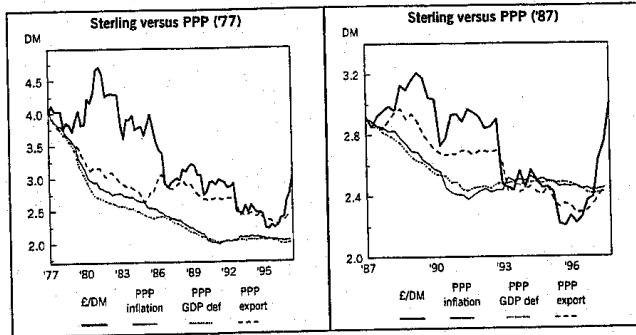
Dollar



Dollar fairly valued

The dollar shows that the market rate can for a long time differ considerably from the rate based on PPP analysis. Sharp interest-rate hikes and substantial demand for capital in the US doubled the value of the dollar at the beginning of the eighties to around DM 3.5, whereas according to price differences the value should have fallen. Taking 1977 as a basis, the present rate of around DM 1.80 may be considered reasonable, however. According to the inflation differential the dollar is slightly overvalued; according to the GDP deflator the current rate is correct, and based on export prices it is slightly undervalued. The present rate of DM 1.80 is also justifiable based on the base year 1987.

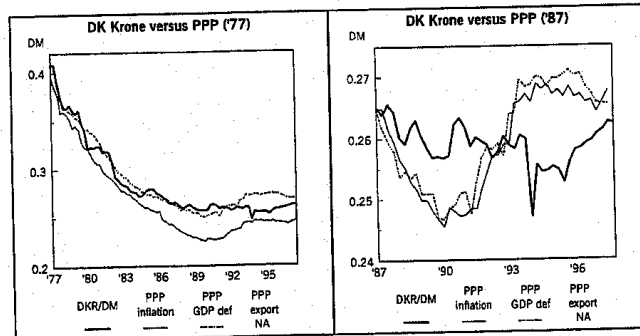
Sterling



Sterling very overvalued

Until the past year the trend of the pound sterling was downward. The pound went from being worth over DM 4.5 in 1980 to roughly half that 15 years later. This depreciation can be partly ascribed to relatively high prices in the UK. Using 1977 as a basis, the very sharp depreciation of sterling is logical according to the inflation differential and the GDP deflator. According to these indicators sterling should depreciate further. The difference with German export prices, somewhat modifies this conclusion. From 1996 onwards, there has indeed been reason for sterling to appreciate, although the actual recovery has been excessive. The same conclusion can be drawn with 1987 as the base year. All three yardsticks based on either year indicate that sterling is once again highly overvalued. Taking 1987 as the base year, DM 2.50 would be a better exchange rate than the present DM 3. A DM 2.50 rate is rumoured to be the one that will be targeted if sterling rejoins the ERM.

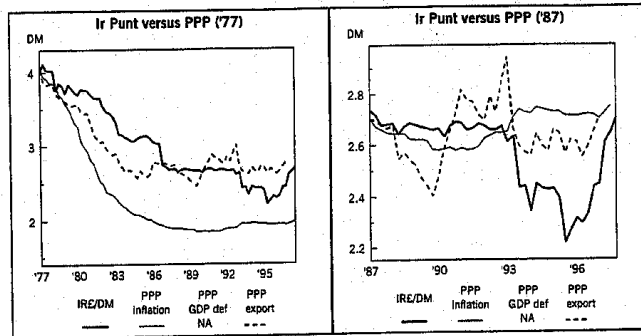
Danish krone



Danish krone fairly valued

The gradual depreciation of the Danish krone has largely paralleled the relative trend of the GDP deflator since 1977. The trend of retail prices on the other hand, warrants a lower krone, although this has become less urgent as a result of the relatively good performance of recent years. Taking 1987 as the base year, when the krone was officially devalued for the last time, the krone now seems to be even undervalued slightly. This undervaluation is also so marginal that the central rate will not present a problem if Denmark decides to join the euro, although this remains unlikely at the moment. Unfortunately, no comparable export price indicator is available for Denmark.

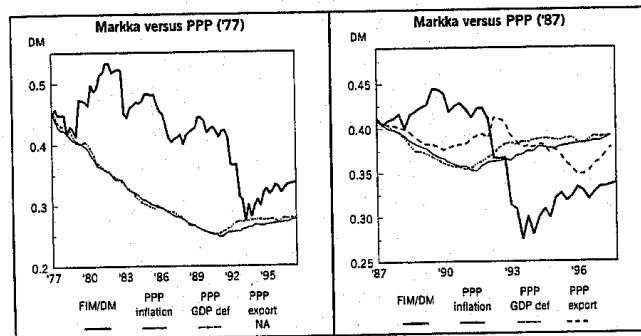
Irish punt



Return to ERM middle rate unlikely

The Irish punt tends to move in line with sterling. Taking 1977 as the base year, the punt has generally moved in line with export price differences. The relatively high Irish inflation rate, on the other hand, has not been completely reflected in the movement of the Irish punt, particularly at the beginning of the eighties. Taking 1987 as the base year, the present exchange rate is in line with both the inflation differential and differences in export prices. However, partly because of the sharp appreciation of the pound sterling, the punt has climbed 10% above the ERM central rate to the ERM ceiling. Any return to the central rate therefore would require a 10% depreciation. If the present rate were used as the yardstick, the central rate of the Irish punt would revalue by about 10% against the ecu in the coming year, which would make up for the one-sided 10% devaluation in 1993. That devaluation was brought about by the nose-dive taken by the pound sterling after its departure from the ERM.

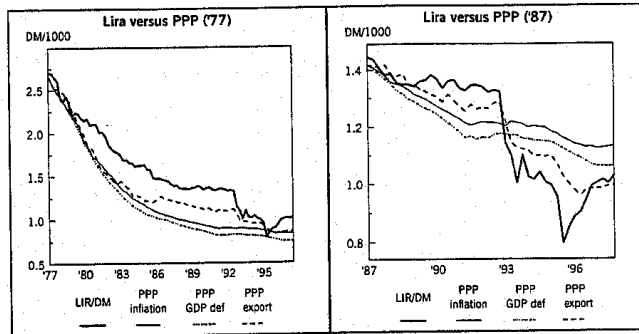
Finnish markka



No unequivocal conclusion on the markka

The Finnish markka joined the ERM in 1996. Taking 1977 as the base year, the initial exchange rate was on the high side. According to the differences in the GDP deflator and inflation, the only time the Finnish markka has been fairly priced was when it reached a record low in 1993. Taking 1987 as the base year, the conclusion is completely different. According to all three of the relative yardsticks, the present value of the markka is too low. Since the findings based on 1977 differ from those based on 1987, it is impossible to come to an unequivocal conclusion. On balance, membership at the present central rate does not seem to present a problem.

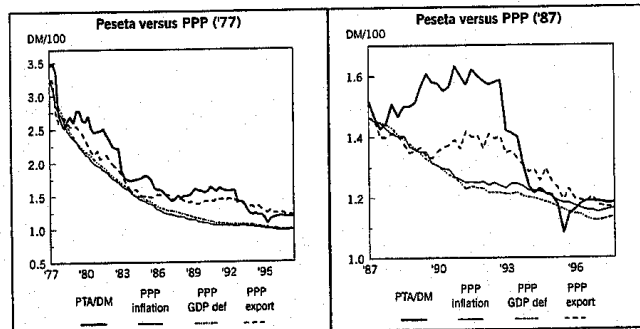
Italian lira



Lira more or less fairly valued

Like the pound sterling and the Danish krone, the Italian lira has also long been an uncertain candidate for membership of the euro. The tide has now turned, and we expect the Italians to join. Taking 1977 as the base year, the lira is slightly overvalued at the present exchange rate. Numerous devaluations and depreciation after Italy withdrew from the ERM in 1992 have not yet entirely compensated for the wide inflation differential from the eighties. Taking 1987 as the base year, it is easier to defend the current value of the lira. The exchange rate is a particularly good reflection of export price differences. Taking either the GDP deflator or inflation as the yardstick, the lira even warrants a slightly higher exchange rate. Membership of the euro at the middle rate is therefore not a problem on balance.

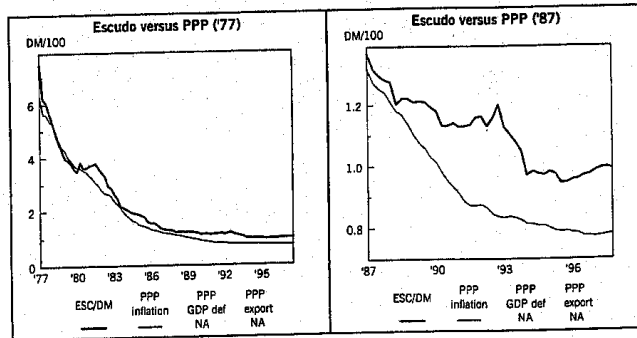
Spanish peseta



Peseta slightly overvalued

Given the progress made with bringing down inflation and with restructuring public finances, the Spanish peseta is now a real contender for membership of the euro. Taking 1977 as the base year, the peseta is slightly overvalued based on the inflation differential. According to the differences in export prices, however, the present price is quite fair. The same conclusion can also be drawn based on export prices when 1987 is taken as the base year. According to the inflation differential and the GDP deflator, the peseta is slightly overvalued at present. We conclude that the present value of the Spanish peseta will be no great obstacle, on balance, to membership of the EMU.

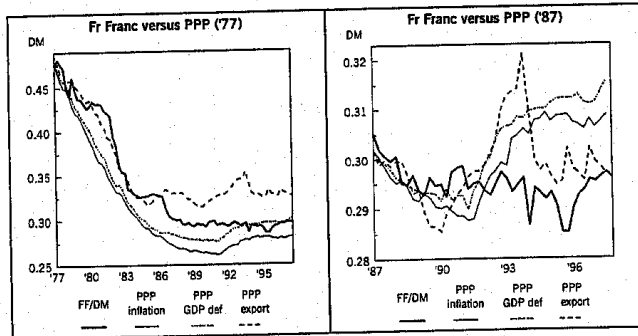
Portuguese escudo



Escudo remains overvalued

Only one major yardstick is available for the Portuguese economy, i.e. inflation. The escudo has steadily fallen from around eight pfennig in 1977, to one pfennig today. However, inflation throughout those twenty years has been so high that the escudo is still relatively expensive when 1977 is taken as the base year. In principle, this supposed overvaluation of the escudo would present a threat in the event of conversion to the euro at the present rate. This would probably mean the overvalued escudo would continue to play havoc with the Portuguese economy. Another problem is that there are no other price yardsticks available for use as a check.

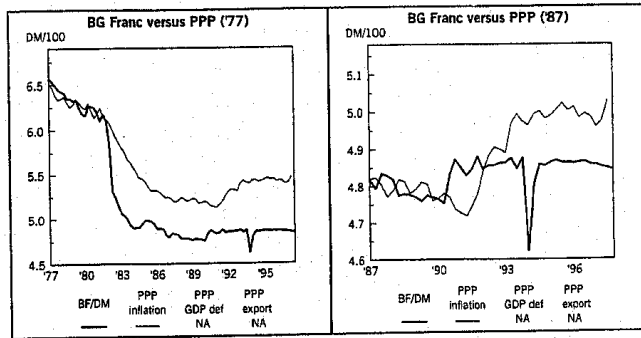
French franc



French franc slightly undervalued

France's Keynesian policy at the beginning of the eighties, which provoked rising inflation and an outflow of capital coupled with a weak franc, was followed by the gradual imposition of the *franc fort* policy. French inflation has been under control for some years, and that has ensured that the French franc could withstand speculative attack in 1993. Taking 1977 as the basis, the French franc is even undervalued according to export price differences. If the GDP deflator is taken as the yardstick, the French franc is fairly valued, but when inflation is taken into account it is slightly overvalued. When 1987 is used as the basis, the strong position of the French franc is more unequivocal. The French franc deserves a higher value according to both inflation and the GDP deflator. When relative export prices are taken into account, the French franc appears fairly valued. On balance, it should be possible to maintain the present exchange rate for conversion to the euro.

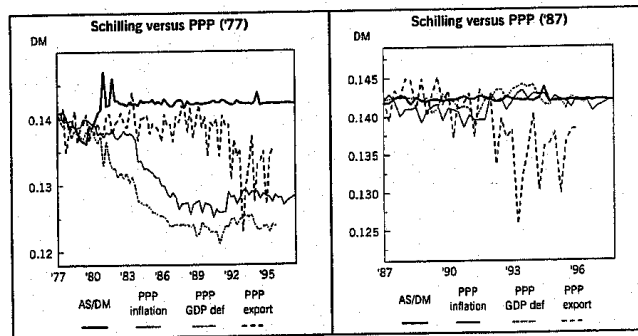
Belgian franc



Belgian franc undervalued

The Belgian franc dropped in value rather sharply in line with the French franc in the first years of the ERM at the start of the eighties. Relative to the inflationary pressure, the Belgian franc's depreciation may even be termed excessive. Taking 1977 as the base year, the Belgian franc is therefore undervalued according to the inflation differential. It likewise appears undervalued when 1987 exchange rates are taken as the basis. Belgium's relative performance on inflation has been excellent, particularly since 1993. Provided Belgium is not held back by its sky-high debt ratio, membership at the middle rate at least is a logical step. Unfortunately, it is impossible to check using the other price components: the GDP deflator and export prices.

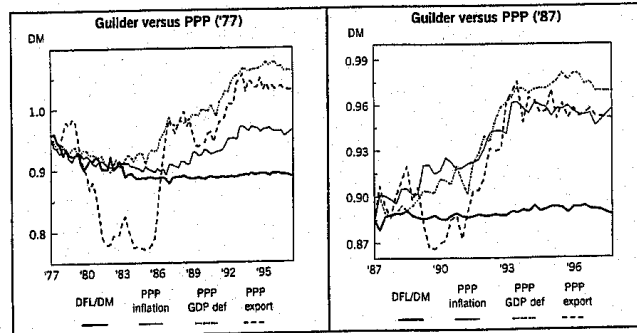
Austrian schilling



Austrian schilling overvalued

The Austrian schilling, like the guilder, has been pegged to the D-Mark since the beginning of the eighties. Although Austria has only belonged to the ERM since 1993, there has been almost no appreciable change in the mutual exchange rate since 1982. But this does not mean that the economies have also been synchronised. For much of the eighties price indicators for Austria were higher than for Germany. Taking 1977 as the base year, the Austrian schilling is now overvalued. The relationships are, however, less black and white when 1987 is used as the basis. Inflation since 1987 has been virtually identical to that of Germany. Volatile export prices indicate a slight overvaluation. The differences are so small that Austria's membership at the present exchange rate is virtually assured.

Dutch guilder



Guilder undervalued

The bilateral guilder/D-Mark exchange rate has not changed since the 2% devaluation in 1983. The Netherlands is also the only country that has kept to the old bilateral ERM criterion of a maximum 2.25% band against the D-Mark. Against this fixed exchange rate, however, there is the consistently better performance of Dutch prices. Taking 1977 as the base year, this has now led to a substantially undervalued guilder. According to the inflation differential, one guilder should now equal almost one D-Mark, and according to the GDP deflator and export prices the guilder should be valued even more highly. The same conclusions can be drawn if 1987 is used as the base year. All three yardsticks come out at roughly one D-Mark to one guilder. It is therefore likely that if the central rate is taken as the guideline for conversion, the Netherlands will continue to benefit from its good competitive position.³⁾

3. Conclusion

PPP important for ERM

The values of most European currencies display a rather strong correlation with differences in price trends. The relative trend of export prices seems to be a particularly good yardstick of the fundamental value of a currency. This is logical, given the strong intra-Europe trading links. Severe erosion of the competitiveness of an economy by overly high inflation, as was the case with Italy at the start of the nineties, must therefore ultimately lead to a correction. The ERM has also created a certain rigidity, so it can be a long time before the axe finally falls. For Italy that moment came in 1992-1994. PPP analysis based on price differences with Germany is less important for the pound sterling and the US dollar. Trade links with Europe are not as strong and sentiment considerations play a more important role. Thus the unfavourable sentiment concerning the Euro has had a major impact on sterling and the dollar in recent months.

We can conclude that the present dollar exchange rate is reasonably in agreement with price differences with Germany. Since we ascribe little significance to the PPP analysis for the dollar, we can still see room for a stronger dollar. The main reason for this is the prevailing anti-EMU sentiment, see Chapter 2. A similar argument can be made for sterling, although the counter-forces are stronger than is the case with the dollar. British exporting industry in particular has had to cope with considerable loss of competitive edge. We feel that sterling's present overvaluation (roughly 20%) is now so excessive that action will be taken to try to force it down. Given the sentiment on EMU this will presumably take the form of a lower pound/dollar exchange rate.

³⁾ Differences in Unit Labour Costs allow for the same conclusion (see *European Economy*, March/April 1997, supplement A).