



The Euro

Derek Riley

► To cite this version:

| Derek Riley. The Euro: Cahiers du CEG, n° 35. 2000. hal-02437370

HAL Id: hal-02437370

<https://ifp.hal.science/hal-02437370>

Preprint submitted on 13 Jan 2020

HAL is a multi-disciplinary open access archive for the deposit and dissemination of scientific research documents, whether they are published or not. The documents may come from teaching and research institutions in France or abroad, or from public or private research centers.

L'archive ouverte pluridisciplinaire **HAL**, est destinée au dépôt et à la diffusion de documents scientifiques de niveau recherche, publiés ou non, émanant des établissements d'enseignement et de recherche français ou étrangers, des laboratoires publics ou privés.

Centre Économie et Gestion

The Euro

Derek RILEY

Février 2000

Cahiers du CEG - n° 35

Série Synthèses et Analyses

ÉCOLE DU PÉTROLE ET DES MOTEURS

Centre Économie et Gestion

228-232, avenue Napoléon Bonaparte

92852 RUEIL-MALMAISON CEDEX

téléphone : 01 47 52 66 87 - télécopieur : 01 47 52 70 66

Résumé

A number of studies and reports are now readily available on how to come to grips with the Euro – its calendar, conversion factors, legal, financial and accounting aspects, and so forth. Typically, they point to a fixed-for-ever rate of exchange between participating countries, which of course may have strategic consequences for the location of many types of business. This survey does not seek to be exhaustive, nor to cover what is well documented elsewhere. Rather, it attempts to examine areas where uncertainty, or controversy continue to exist, as well as focus on aspects that are pertinent to the oil and gas industries. Two questions stand out. The first is a general one, concerning how the new currency is likely to fare in international currency markets, notably relative to the US \$. The second is closely linked to the first, but is specific to the hydrocarbons business : will European oil and gas prices be quoted in Euros and, if so, over what time frame ?

La collection "Cahiers du CEG" est un recueil de présentations de travaux réalisés au Centre Économie et Gestion de l'École du Pétrole et des Moteurs, Institut Français du Pétrole, travaux de recherche ou notes de synthèse. Elle a été mise en place pour permettre la diffusion de ces travaux, parfois sous une forme encore provisoire, afin de susciter des échanges de points de vue sur les sujets abordés.

Les opinions émises dans les textes publiés dans cette collection doivent être considérées comme propres à leurs auteurs et ne reflètent pas nécessairement le point de vue de l'École du Pétrole et des Moteurs ou de l'IFP.

Pour toute information complémentaire, prière de contacter :

Valérie SAINT-ANTONIN tél. : 01 47 52 66 87

The "Cahiers du CEG" is a collection of articles carried out at the Center for Economics and Management of the IFP School, Institut Français du Pétrole. It is designed to promote an exchange of ideas on the topics covered.

The opinions expressed are the sole responsibility of the author(s) and do not necessarily reflect the views of the IFP School or IFP.

For any additional information, please contact :

Valérie SAINT-ANTONIN Phone. : + 33 1 47 52 66 87

Background

The Euro is one of the most recent developments of the original “Common Market”, or “European Economic Community” (EEC), which came into existence over 40 years ago with the Treaty of Rome in 1957. Its objective then was as much to prevent a 3rd World War (WW III) by linking nations economically, as it was to promote free trade.

The integration process has subsequently gone far beyond the confines of the coal and steel industries that were initially placed on an equal footing among member states, or a simple customs union, both of which seemed ambitious at the time. Integration now is almost synonymous with unification, as it has come to include the freedom of movement of capital and labour, as well as of goods, thus giving birth to the “Single Market” and the “European Union” (EU).

The Euro - a single currency - is an emanation of the Single Market, reinforcing the consequences of the latter for those countries that participate. Membership criteria and the gestation period for convergence were set in stone at the Treaty of Maastricht in December 1991.

Frequently referred to as the ECU (European Currency Unit), the future currency found a consensual name “Euro” that sounds right (or does not offend) in all languages concerned. Thus baptised, it was born on schedule in January 1999, though it will only become fully fledged with all the attributes of an international currency in 2002. At the beginning of January of that year Euro notes and coins will be introduced alongside national currencies of participating countries. The latter will be withdrawn as soon as possible to avoid unnecessary complication for business and individuals. Initially this dual circulation was to last six months. Thanks to effective lobbying and a reassessment of logistics, the Euro is now scheduled to replace national currencies after only two months.

A considerable body of international opinion thought that the Euro would never see the light of day. One good reason was that new currencies historically have emerged and prospered after political union, not before it. Today, for some non-participants, the Euro is suspect, as it is seen as a sacrifice of sovereignty, an important step along the path to political union and the hegemony of “Brussels’ bureaucrats”. True, national monetary and exchange rate policies have been handed over to the European Central bank (ECB) in Frankfurt, while room for manoeuvre in national budgets is severely constrained. However, it is arguable that autonomy on these three fronts would be no greater for most participants, were they to have remained outside the European Monetary System (EMS).

It’s worth recalling for the purposes of our analysis that the EU, comprising 15 countries¹ in Western Europe and with a long list of candidates for membership (notably from Central and Eastern Europe), does not have as members either Switzerland or Norway. It is logical to expect that only club members of the EU adopt the Euro. However, 4 out of the 15 either don’t meet the Maastricht criteria (Greece), or didn’t wish to participate at the outset (the UK, Denmark and Sweden). The 11 countries that have opted to replace their national currency by the Euro are hereafter designated as “Euroland”.

¹ Germany, France, Italy, Belgium, the Netherlands, Luxembourg (the original 6) + the United Kingdom, Ireland, Spain, Portugal, Denmark, Sweden, Finland, Austria and Greece.

Scope and Aims

A number of studies and reports are now readily available on how to come to grips with the Euro – its calendar, conversion factors, legal, financial and accounting aspects, and so forth. Typically, they point to a fixed-for-ever rate of exchange between participating countries, which of course may have strategic consequences for the location of many types of business. This survey does not seek to be exhaustive, nor to cover what is well documented elsewhere. Rather, it attempts to examine areas where uncertainty, or controversy continue to exist, as well as focus on aspects that are pertinent to the oil and gas industries. Two questions stand out. The first is a general one, concerning how the Euro is likely to fare in international currency markets, notably relative to the US \$. The second is closely linked to the first, but is specific to the hydrocarbons business : will European oil and gas prices be quoted in Euros and, if so, over what time frame ? Finally, this review looks briefly at a selection of other impacts relevant to the energy business.

The Euro and the \$

At the risk of over-simplification, but in line with current practice, we can submit that there only three significant currencies in the world : the US \$, the Euro and the Yen. Most other denominations are satellites to one, occasionally two of them. The latter is the case of the £ Sterling, for example. The Euro has of course taken over where the Deutsche Mark left off, at least as far as continental Europe is concerned.

We can take one step further : until 01.01.99 there was really only one world currency - the \$. Since WW II it has increasingly dominated international transactions, whether for trade in goods and services, or for capital movements. It is also by far the preferred vehicle for central banks' holdings of foreign exchange : it pays interest, whereas gold does not. It is thus the world's prime reserve currency². Even the International Monetary Fund's composite world accounting unit, the Special Drawing Right (SDR) is heavily weighted in favour of the \$. Americans can almost be forgiven when they assert - and of course believe – “A \$ is a \$, period.” For them there are no ifs or buts : the \$ is absolute. They can go anywhere with it.

Let's note that in the past the \$ was by no means perfect – if it had been, there would be no place for the Euro ! Ever since the \$ ceased to be convertible into gold in 1971 it has been subject to fluctuations against the other respectable currencies. These in part reflect the “benign neglect” that only the world's reserve currency has been able to enjoy. For many years of post-war penury, there was an insatiable thirst for \$, the one currency capable of lubricating world merchandise transactions. The euro-\$ (or off-shore \$), controlled by nobody, was created out of US current account deficits and associated foreign debt. But there were also times in the 70s and 80s when the perception has been one of \$ saturation, which is where US benign neglect conveniently comes into play – “That's your problem, not ours” is the stock American reaction to any suggestion of US abuse of position. The

² To have international reserve status, a currency must fulfil three functions :

it serves as a means of exchange or payment and may be used by central banks for intervention in currency markets;

it is a store of value for saving, lending or borrowing, whether private or public (cf. official reserves) ;

it is a unit of account serving as a reference/ measure, possibly lending itself to establishing the prices of widely traded commodities such as crude oil.

result for the \$'s value in French Franc terms : extremes of less than 4 and more than 10, with an equilibrium value (in ppp terms³) put at around 6.50.

Yet with the birth of the Euro the \$ is absolute no longer. It has become relative. This fundamental change will become increasingly apparent as the Euro takes on its full attributes, notably from 2002 when it will acquire a new credibility and thrust with the issue of notes and coins, over and above its current scriptural, or book-keeping status.

Both currencies can safely be considered to be sound, or solid. No-one is ever likely to think of either as “funny money”. Yet this will not prevent the value of the one from fluctuating relative to the value of the other. One will emerge temporarily, perhaps durably, strong and the other correspondingly weak. Nevertheless, these are relative terms : each is solidly anchored. Inflation is the key here. Neither the USA nor Euroland will tolerate inflation durably in excess of 2 to 2.5% p.a., as measured by the consumer price index. There is also increased attention paid by central banks to another kind of inflation – that of asset prices (stocks and/or real estate).

Below are set out the key factors likely to affect the relative strength/weakness of the two currencies :

- **Inflation** remains a factor in the sense that Euroland's Central Bank (ECB) is likely to be more vigilant than the USA's Federal Reserve Bank (Fed). For one thing the ECB has no track record and has to show that it is as good a money manager as Germany's Bundesbank, on which it has been modelled. To complicate matters, inflation will probably never be uniform throughout Euroland. If the average for the area turns out to be under 2%, then Germany and France in particular will be offsetting growth linked frictions in peripheral countries by limiting their inflation to say 1.5%. On the other hand, across the Atlantic, while the Fed indeed looks closely at (varying) inflation trends across the States, it is also concerned to keep the US economy on a reasonable growth path, which means that it may be ready to tolerate more inflation (say on average 2.5%) than the ECB. The USA is also currently confronted with a problem of asset price inflation (e.g. stock market “excesses”), and occasionally intervenes to deflate bubbles. In so doing it may make the \$ less desirable for foreign investors.
- **Balance of payments** (current account) trends and levels. Euroland tends to maintain its balance of payments in equilibrium, or in modest surplus. The USA, on the other hand, has got into the bad habit of running recurring deficits. These can have a temporary stabilising influence on the world (e.g. during the Asian crisis), but in the long term will almost certainly be damaging. Right now the US current account deficit is approaching 4% of GDP and US net foreign debt stands at close to 20% of GDP. A non-reserve currency nation would be subject to sanctions by financial markets. Now that the \$ is no longer alone as a reserve currency, it may be storing up trouble for its parity. But as long as the USA remains hand in glove with Japan, which is its largest single external creditor, it is difficult to situate when the moment of truth will come.

³ Ppp = purchasing power parity. This is an abstract measure of the “economic” value of one currency expressed in terms of another. It does not exist in practice, as the juxtaposition of supply and demand in the market only determines a “financial” exchange rate. That rate will reflect financial flows (if any) as well as commercial flows. In consequence currencies can be permanently under- or over-valued, relative to their economic rating. Ppp values are calculated regularly by international institutions such as the World Bank, the IMF, the OECD and the United Nations. Ppp rates do, of course, come in handy for the determination of the appropriate market rate at which each national currency should join the Euro.

- **Placing of foreign exchange reserves.** Several countries, not least greater China (People's Republic + Hong Kong + Taiwan) with some \$ 200 billion of foreign exchange reserves mainly placed in \$, are contemplating diversifying their portfolio, now that a new vehicle is available. They have not yet made a move and may wish to wait and see, as long as the new Euro remains relatively weak, confounding the received wisdom. However, there can be little doubt that the transfer of only a small part of reserves into Euros would have a depressing impact on the \$ and the opposite effect on the Euro.
- **Asset allocation.** Seen on a world-wide basis there is likely over time to be an increased weighting in favour of the countries that make up Euroland. This is simply because there is no longer any exchange rate risk within the area, a factor that will no doubt inspire investor confidence. All the more so, if and when other markets are lacklustre. For the time being, the US stock market still steals the limelight, till when ? It's a question of fundamentals vs. cycles.
- **Interest rate differentials.** Interest rate movements tend to be contagious, especially when the transmitter is the US money/bond market. Right now at the start of the year 2000, US short and long rates reflect the strength and potential tension of the economy. They are significantly higher than in Euroland, even though they have caused Euro-rates to ratchet higher than warranted by local conditions. US rates have been at a premium over German/Euro rates since 1996 and help explain the current strength of the \$ relative to the Euro. The question is how much of a premium is required to keep international capital within the USA, once the US economy loses some of its ebullience ? When the chips are down, short term interest rate management is the principal tool available to the Fed, if it wants to defend the parity of the \$. A 100 basis point (1%) premium over the Euro rate may be necessary to assure external stability, but may not suit domestic conditions. Perhaps the USA can get away with a smaller premium until the ECB has established a credible track record.
- **Relative growth rates of the two economic areas :** NAFTA⁴ and Euroland. This factor has much in common with the previous one. Financial agents prefer the (mostly positive) tensions in markets that are growing to the (often negative) strains in markets that are moving sideways. So, as long as the USA in particular has faster GDP growth than Euroland's, this underpins the \$. The snag is that the USA is in the late stages of its cycle, the upswing having started in 1991. It has already lasted longer than any since WW II. But no one, including the Fed, knows for how many more quarters non-inflationary growth can continue, thanks to the so-called "new economy" reaping the productivity harvest of information technology. Euroland, on the other hand, after 7 lean years associated with Maastricht convergence, is in the early stages of an upswing. It could be long lasting - 7 fat years, perhaps - if recent US experience is any guide. The point is that sooner or later the growth paths will cross, boosting the Euro and taking the wind out of the sails of the \$.
- **Financial stability.** This factor covers both stability at home and at large. We should recall here that central banks are in the business of assuring monetary stability, which includes both price stability and stability of the financial system. There are occasions when systemic risk can lead banks to give priority to the latter, even if this may mean

⁴ North American Free Trade Area comprising the USA, Canada and Mexico. The USA accounts for between 85 and 90% of the area's GDP, depending on the measurement yardstick used.

more inflation because of injections of liquidity to lubricate the wheels of the system. It was the Fed of the USA which assumed, along with the IMF, the role of “banker to the world”, or “banker of last resort” during the SE Asian crisis (1997-99). Fed policy of lowering interest rates below those required for sound domestic management limited contagion in Latin America and elsewhere. True, the USA maintained its special relationship with Japan, extending \$ influence across Asia. Had the Japanese Yen been allowed to fall, it could well have taken the Chinese Yuan with it, thus setting off another downward spiral for the Tiger currencies⁵. There is an inescapable conclusion : the USA was the obvious leader, not least thanks to its long experience of handling international crises. But the Euro was not on the scene until the crisis was almost over and Euroland does not speak with a single voice on the international stage

- **Economic clout..** Now that the Euro is on the map and the \$ has become relative, the question is how relative ? We can approach this measure through the weights derived from this year's GDPs calculated at current market prices and exchange rates. We exclude satellite zones in order to stick to the fundamentals. First, the combined GDP of NAFTA, Euroland and Japan accounts for 66% of world product, thus underlining the dominance of these three currency areas. Of the 66%, the largest single share goes to NAFTA, with 47% of the total, followed by Euroland with 33%, still well ahead of Japan with 20% despite an over-valued Yen. Euroland, at 70% of NAFTA, has critical mass, whereas its members - in isolation - could be ignored by the heavy weights (even mighty Germany forms only 24% of NAFTA). Further, given time, plausibly the whole of the EU will adopt the Euro, thus increasing Euroland's weight by at least 25%, putting it close to that of NAFTA. In terms of its size, Euroland and its Euro can only gain in credibility, as time goes by and as long as nothing goes wrong. Here, of course, the probability that Euroland has embarked on a prolonged upswing takes on its full significance.
- **Political instability** is the last, but not the least important influence on \$ strength. It is ranked last because of its unpredictability. Experience shows that disturbing events in Russia, the Middle East, or Eastern Europe confer a role of safe haven on the \$ for flight capital, movements of which can be considerable. This was also very much the case during the recent Asian crisis, though the Euro might also have been attractive, had it been in existence at the time. Let's recall too that capital can leave safe havens when confidence is restored

In the final analysis, it's a question of confidence in both areas and of one vis-à-vis the other. There is no such thing as a single and durable equilibrium parity for the two currencies. The situation is dynamic, not static. Varying economic flows have to be juxtaposed with much bigger volumes and even greater fluctuations in financial flows. It will take years, possibly decades to balance US external accounts and reduce debt, supposing that there is the will or pressure to rectify this anomaly. So forecasts are not only hazardous, but likely to be wrong. It does seem, however, now that the Euro is on stage alongside the \$, that the latter is significantly overvalued on a long term basis. While it would be convenient for all to think in terms of 1 Euro = 1 \$, a parity closer to 1.20 \$ better embraces the factors reviewed above. The trouble is – if we are close to the mark in our abstract perceptions - that financial markets exaggerate the adjustment process. Because of

⁵ Viz. the S. Korean Won ; Hong Kong \$; Taiwan \$; Singapore \$; Thai Baht ; Malaysian Ringgit. In turn, the Philippine Peso and the Indonesian Rupiah are sensitive to neighbours' devaluations.

the bandwagon effect, an overshoot to 1.30 \$ or more should surprise nobody. Volatility is part and parcel of the floating exchange rate system.

European Oil and Gas Prices – on the way to being quoted in Euros ?

We have seen that Euroland's overall economy is big enough to give the Euro all the attributes of a world-class currency, specifically presenting an effective alternative to the \$ right through to its reserve functions. This, at first sight, implies that prices of products imported in large quantities by Euroland should be quoted in Euros, thus eliminating any exchange rate risk for this major consumer. Yet if we try to apply this logic to oil (crude and products), the answer is by no means evident.

Oil prices are established in two distinct, but inter-linked markets : the physical or spot market on the one hand and the paper or futures market on the other. To be sure, there is a European (and beyond) crude oil price, which takes into account local conditions. Quotes are made in terms of BRENT, or its equivalent quality ... in US \$ per barrel. Yet, as oil is transportable at a relatively minor cost, the crude oil price is determined on a world wide basis, taking into account notably conditions in the USA, where the benchmark WTI price will often have an influence on the Brent price. Similarly, the DUBAI price - in \$ of course - reflects conditions in the Persian Gulf, as well as further afield. This inter-action across the world, combined with the simple fact that the \$ was there first, makes that currency difficult to unseat.

To take the **physical market** first, Table 1 provides perspective on volumes. We can note that Euroland is a major consumer of crude, though with only half the absorption of NAFTA. It is an insignificant producer, thus making it a much bigger importer than NAFTA, accounting for a quarter of the world's inter-regional trade movements in crude and products. Among its sources of supply, it absorbs close to 50% of FSU and African exports - which should be more than enough to persuade their traders to deal in Euro -, but less than a quarter of Middle East exports, the prime destination (54%) for which is Asia/Japan, which are \$ dominated areas. Some OAPEEC countries could be interested in diversifying their currency risk, at least to the extent that they import goods and services from Euroland .. and all the more so when the \$ starts to weaken. But some too have most of their foreign assets in the USA. When all is said and done, at least two thirds of inter-regional trade movements go to destinations where the \$ is king. That's quite a hurdle for the Euro. Still, let's recall that whether the crude oil price is expressed in \$ or in Euro, it's determined by the supply and demand for oil. The currency choice is almost incidental and it can be converted at will into other denominations at prevailing exchange rates.

Table 1

Table 1

<u>BENCHMARKS ON OIL AND GAS MARKET SIZE IN 1998</u>				
	<u>W. EUROPE</u>	+	detail Europe/Euroland	<u>NAFTA</u>
<u>OIL</u> (mbd) :				
Production	6.9 (of which UK 2.8; Norway 3.2)		Euroland 0.6	14.2
Consumption	16.1 (of which UK 1.7; Norway 0.2)		Euroland 10.7 (15% of world)	21.4 (30% of world)
Net imports	9.2 (of which UK -1.1; Norway -3.0)		Euroland 10.1	7.2
Main sources of imports				
	FSU 1.9; Middle East 4.3; Africa 2.8		S&C America 2.9; Middle East 2.2; Africa 1.8	
Refinery capacities				
	16.3 (of which UK 1.8; Norway 0.3)		Euroland 10.0	19.4
<u>NATURAL GAS</u> (mbdoe)				
Production	4.9 (of which UK 1.6; Norway 0.9)		Euroland 1.8	13.3
Consumption	7.7 (of which UK 1.6; Norway 0.1)		Euroland 4.6 (11% of world)	12.9 (32% of world)
Net imports	2.8 (of which UK 0; Norway - 0.8)		Euroland 2.8	- 0.4
Main sources of imports				
	FSU 2.0; Africa 0.8 -			

Table 1 also reveals significant quantitative differences between Euroland and Western Europe (almost synonymous with the EU). A key reason is the non-participation of the two major North Sea oil producers in Euroland. As long as the UK, an EU member, stays out of the Euro, chances that Brent oil will be quoted in Euro are slim. Once the UK joins, chances could improve considerably. Norway - not even an EU member - would not move without a UK lead, but since both countries export primarily to continental Europe and Norway exports nearly all of its oil and gas production, the Euro could logically become their principal currency yardstick.

British participation in Euroland looks increasingly probable around 2002, after the UK's next general elections, provided of course that nothing goes seriously wrong with the Euro meanwhile. Not only is Prime Minister Blair gradually persuading his New Labour party that the pros of membership outweigh the cons of isolation, but business (e.g. BMW vis-à-vis British component suppliers to Rover; Japanese manufacturing subsidiaries using the UK as a base to supply Europe; ...) is adding an increasingly strident pro-Euro voice to that of the City : in brief – no Euro, less business : job losses. The Euro is bound to penetrate chunks of the UK market, helping to persuade politicians to give it de jure status.

On the refining front, Euroland has critical mass, which makes it feasible to move over quickly to quoting products ex-refinery in Euros. Most of them are close to their final market. However, the main oil products are also widely traded of course in \$ at the present time. Rotterdam serves as the largest product clearing house. The question

regarding who bears the exchange rate risk – the crude producer or the product refiner - needs to be posed, especially where integration is minimal and profit centres are operative. Why, for example, should a hyper-market chain of distributors be able to buy product in Euros, when an oil company's own integrated distribution network carries the currency risk ?

Chances for rapid penetration by the Euro are perhaps greatest in the European gas market, despite gas prices being closely linked to oil prices. Europe's gas market is largely insulated from the world's two other major markets (NAFTA and Asia) by the barrier of transportation costs. Where inter-regional trade takes place, it is far more by fixed origin-destination pipelines than by only slightly more flexible LNG carriers. Thus all of FSU exported gas is pipelined to Europe (including limited volumes to Central Europe). The quasi-totality of African gas exports is earmarked for W. Europe. The Euro's gas hurdles are much lower than for oil. The UK is not an important element here : it is on balance self-sufficient in natural gas. It is unlikely that Norway, a major supplier to Euroland, but nowhere else, would put up much resistance to contracting in Euros.

It is worth recalling at this point that within the major oil companies, their two trading functions (currency/interest rates and oil) have historically been run as separate entities. One is in Group finance. The other is on line in an operating division. This is hardly conducive to close co-operation. At times, it could well mean that risk management is at cross purposes, e.g. regarding back-to-back cover, or swaps. Now that currency traders suddenly have 9 or 10 less currencies to deal with, there is scope for a rethink on optimal organisation. Shouldn't someone co-ordinate oil traders' two (currency and price) exposures, until such time as the first of these risks is largely removed by use of the Euro ?

The main oil bastion for the \$ is no doubt **paper and futures trading**, where it is completely dominant. The advantage of being there first is paramount. It will be extremely difficult for the Euro to develop the depth and volumes that make these markets liquid, hence attractive. In any case new markets in futures contracts are difficult to start up. For example, the Mogas contract on the IPE never got off the ground : it was too specialised to generate adequate turnover.

Futures markets have to cater to three main types of operator :

- commercial - the oil companies, which are usually “short”,
(i.e. have sold their future production forward);
- non-commercial - investment banks and hedge funds -
these are usually “long”, or takers, ready to roll their contracts forward;
- other - numerous small operators (e.g. Belgian dentists), with low volume.

It is the second category that has to be convinced on market depth and breadth, as these operators are the key paper market makers and takers of speculative (time) positions. Paper volumes traded are 5 times European physical consumption for IPE Brent and 7.5 times NAFTA consumption for NYMEX WTI. Moreover, there is continuous arbitrage on spreads between the two exchanges, making the \$ a very convenient vehicle. Not only is the volume of crude traded on NYMEX more than twice that of the IPE, but NYMEX also has better coverage of the “longer” term (6 months to 2, or more rarely 3 years).

Table 2

<u>PAPER AND FUTURES MARKET VOLUMES (Mb/d)</u>		
	<u>W. EUROPE</u>	<u>NAFTA</u>
Exchange concerned :	International Petroleum	New York Mercantile (NYMEX)
Abbreviation/ ref. crude	IPE – Brent	NYMEX – WTI
Monthly average crude futures trading volume		
1996 Year	42	96
1997 Year	39	99
1998 Year	53	115
1999 Year to November	64	150
1999 – November	78	165
of which (contract duration) :		
less than 1 month	45	75
2 to 3 months	20	35
3 to 6 months	8	20
more than 6 months	5	35

One way for the Euro to enter the lists may be to equip it with a \$ linking clause for contract purposes. Precedents are implicitly to be found in international bond markets, where different currency denominations and maturities seem to happily co-habit – interest rate differentials take care of differences in appreciation. Bearing in mind that most oil futures business concerns a fairly short time horizon (3 to 6 months ahead), it may be feasible for an arbitrageur (or the IPE itself) to propose a Euro/\$ settlement mechanism. This is less forbidding than it looks, as it's only at the intervals of settlement for net contracts still outstanding at the time that the currency choice has to be made.

To conclude, penetration of all these markets by the Euro will not be easy. For it to begin to roll, gas markets seem the most accessible. The next target looks to be downstream oil, starting with products that are little exposed to trade across the Atlantic. Then comes physically traded crude, but certainly not before the UK adopts the Euro. In order to give Euro penetration an important boost, it requires only a little imagination to envisage the European Parliament legislating in incentives (e.g. fiscal) for Euro-denominated crude oil purchases. Only when transaction volumes are substantial can there be the base on which to build a paper/futures trading function for the Euro. It might take a decade to become fully fledged.

Brief Comment on some other Euro Impacts

Prices of petroleum products vary widely from market to market, mainly because of differences in fiscal loading. The temptation for governments is to tax even more to cover their own spending excesses, as demand is price inelastic in the short run and because such a policy is tolerated by the public as environmentally pro-active. The Euro will serve as a fiscal leveller, owing to its transparency and the arbitrage that inevitably takes place close to frontiers, making fools of those who insist on taxing more than their neighbours.

The Euro (combined with the single Market) is a catalyst for mergers and acquisitions in many sectors, including the retail trade, thus confronting suppliers to retailers with powerful central purchasing units operating across Euroland. This is one reason for further

concentration in the oil patch itself. In addition, European refining is long overdue for an overhaul. The Euro is helping to bring this about, being one catalyst among several for mergers among the major oil companies. Other energy suppliers (gas, electricity distribution) are also merging, though this may be due as much to enforced deregulation within the Single Market as to the birth of the Euro.

The Euro will feed on its own success. More and more companies outside Euroland, in order to stay competitive, will tender for business in Euros, thus taking on the associated exchange rate risk. To the extent that this could be significant or require at times costly forward cover, companies are going to lobby their governments for “a level playing field”, preferably meaning membership of Euroland.

Substantial differences in wage rates and employee compensation will persist across Euroland, reflecting overall productivity levels of individual economies. Particular sectors may be at considerable variance with these averages, offering opportunities for rationalisation, compatible with Euroland-wide logistics. The chosen parity at which national currencies joined or will join the Euro will also play a role here, though any anomalies will only become apparent after several years.

Déjà parus

CEG-1. D. PERRUCHET, J.-P. CUEILLE,

Compagnies pétrolières internationales : intégration verticale et niveau de risque.
Novembre 1990

CEG-2. C. BARRET, P. CHOLLET,

Canadian gas exports: modeling a market in disequilibrium.
Juin 1990

CEG-3. J.-P. FAVENNEC, V. PREVOT,

Raffinage et environnement.
Janvier 1991

CEG-4. D. BABUSIAUX,

Note sur le choix des investissements en présence de rationnement du capital.
Janvier 1990

CEG-5. J.-L. KARNIK,

Les résultats financiers des sociétés de raffinage distribution en France 1978-89.
Mars 1991

CEG-6. I. CADORET, P. RENOU,

Élasticités et substitutions énergétiques : difficultés méthodologiques.
Avril 1991

CEG-7. I. CADORET, J.-L. KARNIK,

Modélisation de la demande de gaz naturel dans le secteur domestique : France, Italie, Royaume-Uni 1978-1989.
Juillet 1991

CEG-8. J.-M. BREUIL,

Émissions de SO₂ dans l'industrie française : une approche technico-économique.
Septembre 1991

CEG-9. A. FAUVEAU, P. CHOLLET, F. LANTZ,

Changements structurels dans un modèle économétrique de demande de carburant.
Octobre 1991

CEG-10. P. RENOU,

Modélisation des substitutions énergétiques dans les pays de l'OCDE.
Décembre 1991

CEG-11. E. DELAFOSSE,

Marchés gaziers du Sud-Est asiatique : évolutions et enseignements.
Juin 1992

CEG-12. F. LANTZ, C. IOANNIDIS,

Analysis of the French gasoline market since the deregulation of prices.
Juillet 1992

CEG-13. K. FAID,

Analysis of the American oil futures market.
Décembre 1992

CEG-14. S. NACHET,

La réglementation internationale pour la prévention et l'indemnisation des pollutions maritimes par les hydrocarbures.
Mars 1993

CEG-15. J.-L. KARNIK, R. BAKER, D. PERRUCHET,

Les compagnies pétrolières : 1973-1993, vingt ans après.
Juillet 1993

CEG-16. N. ALBA-SAUNAL,

Environnement et élasticités de substitution dans l'industrie ; méthodes et interrogations pour l'avenir.
Septembre 1993

CEG-17. E. DELAFOSSE,

Pays en développement et enjeux gaziers : prendre en compte les contraintes d'accès aux ressources locales.
Octobre 1993

CEG-18. J.P. FAVENNEC, D. BABUSIAUX*,

L'industrie du raffinage dans le Golfe arabe, en Asie et en Europe : comparaison et interdépendance.
Octobre 1993

CEG-19. S. FURLAN,

L'apport de la théorie économique à la définition d'externalité.
Juin 1994

CEG-20. M. CADREN,

Analyse économétrique de l'intégration européenne des produits pétroliers : le marché du diesel en Allemagne et en France.
Novembre 1994

CEG-21. J.L. KARNIK, J. MASSERON*,

L'impact du progrès technique sur l'industrie du pétrole.
Janvier 1995

CEG-22. J.P. FAVENNEC, D. BABUSIAUX,

L'avenir de l'industrie du raffinage.
Janvier 1995

CEG- 23. D. BABUSIAUX, S. YAFIL*,

Relations entre taux de rentabilité interne et taux de rendement comptable.
Mai 1995

CEG-24. D. BABUSIAUX, J. JAYLET*,

Calculs de rentabilité et mode de financement des investissements, vers une nouvelle méthode ?
Juin 1996

CEG-25. J.P. CUEILLE, J. MASSERON*,

Coûts de production des énergies fossiles : situation actuelle et perspectives.
Juillet 1996

CEG-26. J.P. CUEILLE, E. JOURDAIN,

Réductions des externalités : impacts du progrès technique et de l'amélioration de l'efficacité énergétique.
Janvier 1997

CEG-27. J.P. CUEILLE, E. DOS SANTOS,

Approche évolutionniste de la compétitivité des activités amont de la filière pétrolière dans une perspective de long terme.
Février 1997

CEG-28. C. BAUDOUIN, J.P. FAVENNEC,

Marges et perspectives du raffinage.
Avril 1997

CEG-29. P. COUSSY, S. FURLAN, E. JOURDAIN, G. LANDRIEU, J.V. SPADARO, A. RABL,
Tentative d'évaluation monétaire des coûts externes liés à la pollution automobile : difficultés méthodologiques et étude de cas.
Février 1998

CEG-30. J.P. INDJEHAGOPIAN, F. LANTZ, V. SIMON,
Dynamique des prix sur le marché des fiouls domestiques en Europe.
Octobre 1998

CEG-31. A. PIERRU, A. MAURO
Actions et obligations : des options qui s'ignorent.
Janvier 1999

CEG-32. V. LEPEZ, G. MANDONNET
Problèmes de robustesse dans l'estimation des réserves ultimes de pétrole conventionnel.
Mars 1999

CEG-33. J. P. FAVENNEC, P. COPINSCHI
L'amont pétrolier en Afrique de l'Ouest, état des lieux
Octobre 1999

CEG-34. D. BABUSIAUX
Mondialisation et formes de concurrence sur les grands marchés de matières premières énergétiques : le pétrole.
Novembre 1999

* une version anglaise de cet article est disponible sur demande