



REPORT OF THE WORKING GROUP ON OIL PRICE VOLATILITY

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Report of the Working Group on the Volatility of Oil Prices

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EXECUTIVE SUMMARY

Oil has once more attracted the attention of the international community since 2008 due to the major fluctuations in its market price. Under its assignment letter, the working group examined the drivers of oil prices, reviewed on-going work on the subject and considered recommendations to the Government.

1. Oil markets: volatility, financial strategies and prices

The volatility of the price of crude oil¹, as demonstrated in 2008-2009, raises a number of questions over how the price of oil is determined and the complex game of interdependencies between the physical and financial markets.

These markets have been transformed radically over the last ten years, with the following main features:

- ◆ 2000-2003 was marked by relative price stability inside a variation band (22-28 dollars a barrel) which had been decided and set up by the Organisation of the Petroleum Producing Countries (OPEC) following the price collapse in 1998 (10 dollars). This variation range was considered adequate, neither too low to meet the financial needs of exporting countries nor too high to avoid the negative effects on the world economy;
- ◆ the years between 2004 and 2008 were marked by an explosion in the demand for oil sustained by strong world economic growth, both in emerging countries and in the United States. Prices soared towards 100 dollars without affecting world economic growth too severely;
- ◆ at the same time, there was a huge upsurge in financial markets for oil, refined products and, more generally, for commodities². This rapid growth of the financial sphere - with a volume of transactions that would today represent about thirty-five times the oil traded in the physical market - goes hand in hand with increasing numbers of participants, financial products and marketplaces, some regulated (organised markets) and others, of increasing importance, unregulated (over-the-counter - OTC - markets).
- ◆ the 2008-2009 period has therefore raised the problem of interactions between the physical and financial elements. It is marked by three successive phases: between January and July 2008, oil prices rose to 145 dollars, which quickly raised questions over the potential role played by financial markets; between July and December 2008, they dropped to 36 dollars, due to a financial adjustment in investors' positions and falling demand resulting from the economic crisis; during 2009, prices rose to 80 dollars which seems contrary to the state of the physical fundamentals, notwithstanding OPEC's production cuts.

¹ It would be more accurate to talk about major price variations in a given period rather than "volatility" in the statistical or financial sense of the word. The 2008-2009 period stands out for its huge price variations and its intense volatility.

² This term being understood in the sense of agricultural raw materials (soft commodities), metals and other basic products - including petroleum - (hard commodities) likely to be traded on spot or futures markets as "physical" or "paper" trades.

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Oil prices are essentially determined on organised futures markets (American WTI and European Brent contracts) according to both physical and financial fundamentals. The first define the dynamic balance between supply and demand: both feature very low short-term price elasticity, which thus creates conditions of intense volatility. The second go beyond the petroleum market alone and contribute to the operation of financial markets as a whole, where different types of assets, including oil, are constantly competing with each other. Oil therefore creates two distinct demands in the physical and financial markets: a demand for "physical" oil and a demand for "paper" oil.

Players in these markets can have different objectives: price hedging, taking trading positions (speculation), arbitrages over time and between products, portfolio management and risk diversification, especially for indexed funds. One and the same participant can sometimes cover all these objectives.

The complexity of interactions between the physical and the financial therefore restricts any unequivocal explanation of the massive oil price variations in the recent period. In the many published works on the subject, it is difficult to distinguish between the defenders of physical fundamentals (the demand from emerging countries, the fears of a "peak oil", the economic crisis, etc.) and the defenders of financial fundamentals (the role of exchange and interest rates, the upsurge in "paper" oil, the development of new products like commodity index funds, the "herding" behaviour of investors, the action of arbitrageurs between spot and futures markets and its limits).

Nor do available statistical data establish clearly the links of causality between the open positions of financial investors in futures markets and the prices observed in the spot market. On the other hand, nothing suggests these links can be excluded. It is therefore reasonable to conclude that:

- ◆ speculation by some financial actors has amplified the upwards or downwards price movements, increasing the natural volatility of oil prices;
- ◆ it cannot be excluded that such movements occur again in the years to come, with natural volatility joined by that of financial investors who consider oil (and more generally commodities) as a class of arbitrable assets compared with others;
- ◆ strong pressure on the prices will appear by the end of the decade, mainly due to physical fundamentals (under-investment in new production capacities);
- ◆ the functioning of financial oil markets and the financial logic of their operators include risks which are difficult to control and may generate a systemic risk.

The question of the price of oil therefore ends in the more general problem of financial market regulation.

2. On-going work and initiatives to improve the operation of oil markets

The magnitude of variations in oil prices in 2008 and 2009 has forced governments to react strongly just as much as the severity of the economic crisis caused by global financial disorders: the articles by President Nicolas Sarkozy and British Prime Minister Gordon Brown in the Wall Street Journal³, the Jeddah and London energy conferences⁴ and the initiatives by the G8 and the G20⁵ call for thoughts and actions on both the oil issue and the operation of financial markets as a whole. As such, it is especially important to underline the efforts to improve the understanding of the physical fundamentals through the initiative on the transparency of oil markets (Joint Oil Data Initiative), the studies by the International Energy Forum (IEF) and on-going work to foster the regulation of financial markets, especially for commodities.

2.1. The Joint Oil Data Initiative (JODI)

The markets for crude oil and refined products feature a shortage of basic data. An initiative to improve this situation was launched in 2001 by six international organisations (APEC, Eurostat, IEA, OLADE, OPEC and UNSD⁶). The aim was to build a global database containing the main quantitative characteristics (production, demand, refinery intakes and outputs, stock levels and stock changes) of seven petroleum product categories (crude oil, LPG, gasoline, kerosene, diesel oil, fuel oil and other petroleum products). This is a major initiative which must be expanded.

2.2. Work of the International Energy Forum

The International Energy Forum, created in 2000, encompasses today over sixty countries and thirty oil companies in the context of the dialogue between oil producing and consuming countries initiated by France in 1991. A group of experts was set up after the *ad hoc* energy meetings held in Jeddah and London to prepare recommendations to be presented to the IEF ministerial meeting scheduled for March 2010 in Mexico⁷, for "strengthening the architecture of the international dialogue, the IEF and reducing volatility in the oil market". This group of experts, which worked throughout 2009 and submitted its report in December, concludes on three points:

- ◆ use the potential of the IEF - the only forum to include virtually all the major stakeholders in this sector - to the full, to improve the dialogue between producers and consumers of petroleum (and gas) products;

³ Wall Street Journal of 8 July and 10 December 2009.

⁴ Ad hoc Ministerial Energy Meetings of 22 June and 19 December 2008.

⁵ Conclusions of the Aquila G8 of 8 July 2009 and the Pittsburgh G20 of 25 September 2009.

⁶ Asia Pacific Economic Cooperation, Statistical Office of the European Communities, International Energy Agency, Latin-American Energy Organisation, Organisation of Petroleum Exporting Countries, United Nations Statistics Division.

⁷ France was one of eleven countries sitting on the IEF's High Level Steering Group (HLSG), which supervised the work of the group of seven international experts. The former executive director of the IEA, Claude Mandil, was a member of this group.

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- ◆ to limit the volatility of oil markets, improve the understanding of interactions between the physical and financial oil markets, strengthen the obligations of transparency (mainly through JODI) and the regulations on position limits and margin calls of financial participants (though caution was recommended on these last points). The conclusions of the experts are fairly similar to those developed above: given the available data, with an academic approach, nothing suggests that the events of 2008-2009 were due to financial speculation, but neither is the contrary proven;
- ◆ through the IEF, encourage the emergence of a "consensus" on an appropriate price (or a price variation band) for oil, without recourse to restrictive mechanisms with little chance of functioning and which in any case would be opposed by OPEC and the United States. The experts acknowledge the potential existence today of a conjunctural consensus for a variation range of between 60 and 80 dollars a barrel, without however the guarantee that this band will produce a stable market balance.

2.3. Regulatory reforms now envisaged in oil financial markets.

The on-going regulatory changes in petroleum derivatives fall under the more general global reform of financial markets and OTC derivatives. This reform is a mix of transparency considerations (exhaustive recording of transactions in OTC markets, reintegration of some OTC derivatives in organised markets) and limiting counterparty risks (increasing the share of operations cleared through central counterparties - CCPs - and registration in trade repositories under a perspective focusing on the prevention of systemic risks).

In this respect, the United States are way ahead of Europe and could, during 2010, introduce highly-advanced regulations in derivative markets, including specific provisions on commodity derivatives, especially oil. The American Commodity Futures Trading Commission (CFTC) and the British Financial Services Authority (FSA), through the co-presidency of an IOSCO⁸ *ad hoc* working group, are today coordinating discussions on the obligations of transparency, centralised clearing and registration in trade repositories of financial commodity derivatives. In this context, the ramp up in these subjects in Europe, be it in the Commission, ECOFIN or the Council of the European Union, is essential, for France cannot act alone.

3. Recommendations for France

The above analysis leads to give priority to four key points where France could have considerable influence in widening the understanding of oil markets and improving their operation. The report lists these options below in the form of 22 operational proposals.

⁸ International Organisation of Securities Commissions (IOSCO).

3.1. Active support for the initiatives of the International Energy Forum and moving towards greater transparency in oil markets

The IEF is currently the only forum, legitimised by the G20, where energy producing and consuming countries can engage in dialogue in greater depth. This dialogue is not problem-free, as shown for example by the conclusions of the group of experts on the question of the oil price fluctuation band. The Forum - and its Secretariat - nevertheless have a fundamental role to play to accelerate the JODI initiative. This is now the main "shared" instrument⁹ to improve transparency on the physical fundamentals of oil markets. In addition, under the improved regulation of the world economy sought by the international community, the Forum may be called on to consider the oil and energy issues in a far wider context: relations between the price of oil, exchange rates and inflation, organisation of energy-related financial flows, relations between oil, energy and economic development. The international standing of France and the European Commission - which follows the work of the IEF closely and maintains constructive dialogue with OPEC - makes them ideal candidates for playing a major role in this body and reporting on its discussions to the Financial Stability Board (FSB) and the G20.

3.2. Apply the global guidelines set by the G20 fully to the oil financial markets

The objectives of regulatory reforms envisaged in the United States and international work under the auspices of the IOSCO are in line with the G20 guidelines. The influence of the opposing parties must not, however, be under-estimated given their hostility to reinforcing the regulations of oil derivative financial markets: generous exemptions in favour of end users in the United States, competition between the American and British financial centres which may cool regulators' ardour. Due to growing "financialisation", the "light" regulations currently applicable to oil derivative markets, initially intended for professionals, must give way to more comprehensive regulations aimed at dealing with the traditional risks of fraud and abuse of dominant position as well as systemic risks and the absolute need to protect investors.

With the objective of restoring a safe international financial system and under the G20 umbrella, France can only support firmly proposals with the potential to reduce the volatility elements of oil prices and limit the accumulation of risks likely to culminate in a systemic crisis. This presupposes that the new rules can be applied in the same way to all financial centers making up the international financial system. With this in mind, priority must be given to the on-going work by the IMF and FSB and the development of a transatlantic dialogue on the commodities markets which is not simply a CFTC-FSA face-off.

3.3. Introduce additional specific rules

The working group believes that several important points have not been given sufficient consideration in the on-going work on the oil financial markets:

- ◆ the problem of market positions being concentrated in the hands of a few, very powerful participants;

⁹ Compared with, say, the International Energy Agency, which remains very geared to the OECD countries, despite its attempts to establish links with certain large non-OECD consumer countries (China, India, Russia) and OPEC.

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- ◆ the absence of a "Chinese wall" in the commodities markets between the published research activities and the trading activities of financial institutions and, more generally, between the operations carried out on behalf of clients and own-account operations;
- ◆ the status of participants in these markets and the question of protecting non-professional investors.

The American administration now seems to share these concerns¹⁰: the necessary guidelines should be defined internationally.

3.4. Propose a genuine "oil strategy" for the European Union

With the adoption of the Climate and Energy Package in December 2008 under the French Presidency of the Union, Europe has turned a major corner in constructing its energy future. The stated priorities are energy efficiency, reduced GHG emissions, the development of renewable energies and securing supplies, especially for natural gas. The oil issues are not addressed whereas a probable drop in demand would have major consequences for both producers and consumers and the Europe of 27 is heading towards a 90% oil dependency. The working group believes that the Commission should be in a position to propose a genuine "oil strategy" for Europe, which would include:

- ◆ developing demand scenarios for petroleum products for the Union, consistent with the medium-term energy guidelines ;
- ◆ an active role in monitoring, even regulating physical oil markets, as much for concerns over transparency and competition as to ensure consistency with actions undertaken in the financial commodities markets;
- ◆ improve the reliability and shorten the delay for publishing statistics on petroleum products stocks in Europe, before even thinking about increasing the frequency of these publications;
- ◆ harmonisation of oil taxation in the context of low-carbon energy issues;
- ◆ improved coordination of national energy-environmental policies to manage jointly the construction of a less carbon-intense energy package, with controlling demand for petroleum products playing a central role in these policies;
- ◆ cooperation with the Southern countries who are also seeking to reduce their dependency on oil and the volatility of prices.

*

Affecting both the physical and financial markets for oil and refined products, these proposals and recommendations should be submitted at international level, be it to the G20, the European Union or specialised bodies. To implement them, it would be wise for France to develop an "oil diplomacy" which would include all relevant administrations and stakeholders.

¹⁰ See especially the statements by President Obama on 21 January 2010 on the reform of the banking sector and the repeated interventions by the President of the CFTC in favour of strengthening the regulations of derivative financial products in commodities.

PROPOSALS

1. Active support for the initiatives of the International Energy Forum and moving towards greater transparency in oil markets

Proposal no. 1: Actively support actively the initiatives proposed under the work of the group of experts appointed by the IEF, aiming at increasing the legitimacy of the Forum in running the producer-consumer dialogue and reinforcing the dissemination of neutral, transparent information on the fundamentals of the oil market.

Proposal no. 2: Persuade our European partners and the Commission to contribute more widely to the IEF action.

2. Apply the global guidelines set by the G20 fully to the financial commodities markets, especially oil

2.1. The commodities markets in general

Proposal no. 3: Define the “financialised” commodities markets and introduce a specific approach for these markets in terms of regulation and governance.

Proposal no. 4: Spearhead development and rationalisation, on a global scale, and particularly at European level, of sectoral and financial regulation of these markets. The new European financial markets authority, the ESMA, in conjunction with the ESCB, should have a wider role, particularly in monitoring and controlling the systemic risk and protecting investors (fight against market abuse). A new trans-sectoral authority in charge of regulating and supervising commodities should also be set up. The connection between the two authorities should be optimised on a case-by-case basis, depending on the commodities involved (agricultural products, raw materials, energies, CO₂ quotas, etc.).

Proposal no. 5: Optimise the connection nationally between the Financial Market Authority and the sectoral regulator(s) like the Energy Regulation Commission, both legally (linking texts) and practically (putting together cooperation conventions).

Proposal no. 6: Set up permanent, structured international cooperation – not on a one-off basis as is now the case – between the IOSCO and the International Energy Agency, for the benefit of the Financial Stability Board and ultimately the G20.

Proposal no. 7: For all the financialised commodities markets, based on the associated risks and especially the existence of systemic risk, apply the G20 guidelines on financial markets in response to the crisis, mainly through transparency of transactions, standardisation and centralised clearing of contracts (see the measures recommended by the European Commission in its communication of 20 October 2009). Consider the option of extending some of these measures to the physical market for the most relevant contracts in terms of price formation, or equivalent arrangements guaranteeing a same degree of transparency.

2.2. The oil markets in particular

Proposal no. 8: Update the MiFID (restricting exemptions to the status of ISP and studying a new status specific to oil traders, extending the scope of eligible contracts to include contracts other than financial contracts, etc.) consistent with the recommended guidelines for regulation of over-the-counter oil derivatives.

Proposal no. 9 Use all new market infrastructures thus created (especially trade repositories) to improve post-trade transparency and, consequently, the price formation process.

3. Introduce additional specific rules

Proposal no. 10: In addition to extending the field of participants subject to the status of ISP and therefore to its conditions, draw the appropriate conclusions from the arrival of individual investors in the oil markets and the active marketing of financial products in this sector: apply exacting rules vis-à-vis conflicts of interest, consultancy, asset custody, classification (as complex product), information and transparency (on the costs, risks, etc.) to these products, and when marketing them to the general public.

Proposal no. 11: React accordingly to the mixed nature of the oil market by standardising the principle of position limits in the financialised commodities markets, including oil, as an instrument used not only to prevent market manipulations, but also to reduce the macro-economic (poor allocation of capital generating excessive volatility), even systemic (financial collapse of a major, over-exposed participant) risks.

Proposal no. 12: Launch an in-depth study on the use of margin call and capital requirement mechanisms as instruments to increase liquidity in the longest terms to maturity on the futures curve. Check that in the oil sector, clearing via CCPs will impose capital and liquidity restrictions reflecting – no more and no less – the true risk.

Proposal no. 13: Adapt the MAD directive to the special case of oil markets. Based on information gathered from trade repositories on derivatives and from physical markets, investigate the option of reinforcing rules on controlling market abuses and the abuse of dominant positions, by involving the financial regulator, the sectoral regulator (if there is one) and the competition authority.

Proposal no. 14: Separate analysts from derivatives traders/sellers in commodities (Chinese wall) if analyses/recommendations are intended for clients.

Proposal no. 15: More generally, insist on separating own-account activities from activities on behalf of clients.

4. Propose a genuine "oil strategy" for the European Union

Proposal no. 16: Construct scenarios changes in demand for petroleum products at European scale consistent with the Union's environmental strategy, which will serve in particular to fuel the producer/consumer dialogue.

Proposal no. 17: Examine at European level the price formation process in the physical petroleum product markets. Reflect on the economic model for disseminating price information whilst debating the revision of the MiFID.

Proposal no. 18: Develop obligations of transparency with respect to sectoral/financial regulators of operations in the central market for barges in the Antwerp-Rotterdam-Amsterdam zone (ARA).

Proposal no. 19: Encourage the emergence in Europe of a platform for physical petroleum product transactions. This would provide adequate post-trade transparency to professionals and the general public, which could possibly be extended later to pre-trade.

Proposal no. 20: Relaunch the debate on European harmonisation and consistency of petroleum product taxation given the Union's new energy priorities.

Proposal no. 21: Improve the reliability and cut the time taken to publish European stock statistics. Entrust the new trans-sectoral authority supervising commodities with coordinating and updating at European level the publication of relevant information on petroleum stock levels in the territory of each Member country of the European Union and check that each of these countries is complying with its obligations of reserve stocks.

Proposal no. 22: Develop in-depth consultation, under the auspices of the European Commission, on energy policies likely to affect demand for petroleum products in the Union.

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INTRODUCTION

In the letter of engagement dated 9 October 2009 sent to the Working Group, Christine Lagarde, Minister for the Economy, Industry and Employment, raised the question of oil price volatility, a matter of concern for all governments.

Commenting in the *Wall Street Journal* of 8 July 2009, the President of the Republic and the British Prime Minister were alarmed by "erratic price variations of one of the most crucial commodities in the world" which, having reached a peak of 145 dollars in July 2009, collapsed to 36 dollars before rebounding to 80 dollars in 2009. They were worried about negative effects of this volatility on producers and consumers and called for in-depth dialogue to achieve "a common, long-term vision of a price range consistent with the fundamentals".

Two months later, the Heads of State and Government meeting at the G20 summit in Pittsburgh pleaded in their final communiqué for increased transparency in energy markets, strengthened dialogue between producers and consumers and improved monitoring of these markets, in particular to prevent "excessive price volatility".

Numerous bodies have set to work to respond to these expectations since the official statements. They confirm firstly the strategic nature of oil which supplies about 36% of worldwide energy consumption. The OPEC countries hold 78% of world crude oil reserves; they account for 45% of world production and 54% of exports. The price variations have had a major impact on the economies of exporting countries, frequently highly dependent on oil, and on the oil bill for importing countries, with occasionally dramatic consequences for the poorest countries. They can be reflected more or less dramatically in the price of refined products, depending on the level of taxation. In terms of macro-economics, the crude oil price variations alter the wealth transfer flows between importing and exporting countries, with a direct impact on the formation of global savings. Lastly, the crude oil price levels and variations impact the investment decision-making process, both for the oil industry itself and for alternative energies.

The Working Group's letter of engagement defines clearly its objectives and asks three precise questions:

- ◆ To what extent has the development of essentially financial strategies in the oil markets, especially in derivatives, influenced oil prices in the recent past?
- ◆ What is the current thinking on improving the regulation of oil derivative product markets, for example in terms of transparency of information, exchange clearing in derivatives and standardising contracts?
- ◆ What ambitious recommendations could France propose internationally, not just to make a success of fledgling reforms in progress but to increase the scale and influence of these reforms on the oil markets?

These questions call for a three-part plan for this report:

- ◆ A first part examining how oil markets operate and prices are formed, the financial strategies of various participants in these markets, the origin of the increased volatility noted in 2008-2009 and above all whether it is exceptional or long-lasting in nature
- ◆ The second part will take stock of on-going discussions and proposals made at various levels, especially producer-consumer dialogue and on-going or planned reforms in regulating derivative oil product markets in the United States and internationally
- ◆ The third part will put forward the Working Group's recommendations that affect the physical and financial markets in oil and call for decisive action by France internationally, be it in the G20, the European Union or specialised bodies like the International Energy Forum

1. Oil markets: volatility, financial strategies and prices

The increased volatility of oil prices¹, especially since 2008, raises a number of questions over how the price of oil is determined and the complex game of interdependencies between the physical and financial markets, and between their respective fundamentals. It is not the intention here to embark on an exhaustive analysis of these markets. Endless research has been carried out on the topic, which has given rise to endless controversy. These studies most frequently come up against tremendously opaque physical and financial data. An infinite number of correlations can be made from petroleum product prices and the work sometimes produces contradictory results.

Our intention in this first part is to highlight a few major points likely to bolster the proposals made in Part 3. We intend to analyse the recent operation of oil markets to find out whether or not the price volatility is caused by their structural transformation as they increasingly absorb the impact of the financial sphere. This means focusing on the changes in oil markets over the last ten years before being able to assess the risks of continuing volatility in the future.

1.1. The oil markets have been transformed radically over the last ten years

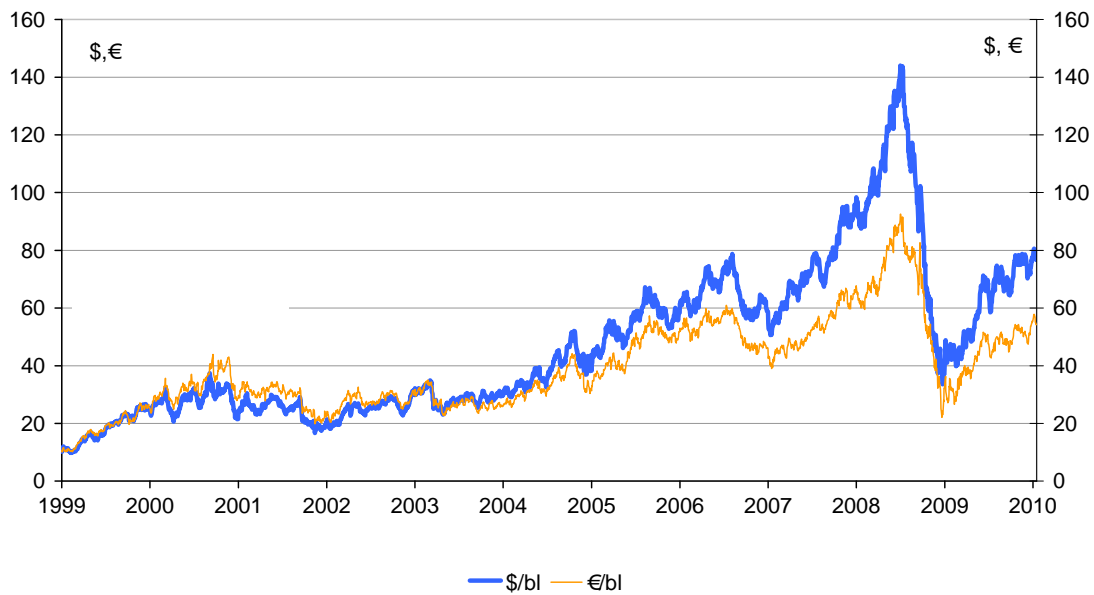
1.1.1. 2000-2003 was a period of relative price stability under the auspices of OPEC

To understand current and future evolution, it is essential to trace the changes in oil markets back to 1998, when crude oil prices were at their lowest since 1971 in constant dollars: 10 dollars a barrel (see Graph 1 below). The major oil exporting countries found this price unacceptable, as did marginal producers in America, as it outstripped their production costs. At 10 dollars a barrel, few exporting countries could balance their budgets and finance their public expenditure. The Organisation of Petroleum Exporting Countries (OPEC) met in 1999 and decided to reduce their production. Their goal was to maintain oil prices within a predictable range, with an upper limit of \$28 a barrel and a lower limit of \$22. Price variations would be controlled by periodic adjustments in national production quotas. This variation range was considered "a fair price": neither too low to meet the financial needs of exporting countries (and guarantee a minimum profit for producers with high extraction costs), nor too high to avoid over-negative effects on the world economy, as had been experienced after the second oil crisis (1979-1980) and which had caused both importing and exporting countries tremendous hardship.

¹ Understood as much in the sense of the scale of oil price fluctuations in a given period as for its traditional statistical definition of annualised value of standard deviations in daily, weekly, monthly or annual prices (see part 1.2.1 of this report on this point).

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Graph 1: Changes in WTI crude oil prices (1st term to maturity) since 1999



Source: Datastream

This decision by OPEC meant that prices remained relatively stable between the final quarter of 1999 and the beginning of 2004, including during 2003 which was one of the most striking years in oil history, marked by three independent political events:

- ◆ In Venezuela, the dispute between President Chavez and the State oil company PDVSA on the use of oil revenues resulted in an extended strike which considerably reduced oil production and exports
- ◆ In Nigeria, political and social unrest in the Niger Delta over the allocation of oil revenues reduced production and exports
- ◆ Lastly, the decision by the United States in March 2003 to invade Iraq had a tremendous impact on the country's oil production and exports

Despite these events, oil prices did not soar, as the OPEC countries (apart from Venezuela, Nigeria and Iraq) were able to supply the market with the "missing barrels". There was considerable spare capacity at this time, which was the key factor in regulating supply and "controlling" oil prices. The various market participants - exporting countries, importing countries, oil companies and major users - found a fairly satisfactory and balanced price signal in this OPEC range. Similarly, the financial markets had partially anticipated these events in the process of forming oil futures prices². One might sketch a possible connection between this period of oil price stability and the subsequent extended period of worldwide economic prosperity (2004-2008). A sustainable price signal is also likely to encourage investments in medium-term growth.

² In particular in terms of the onset of the Iraq conflict, where the main uncertainty was the date on which hostilities would start.

1.1.2. The years 2004 to 2008 were marked by an explosion in world demand - a "third oil crisis"

2004 was the start of a physical imbalance between supply and demand: demand for oil soared, caused by strong world economic growth and accelerating development of emerging countries – China, India and Brazil. It is nevertheless important to put the role of emerging countries during this period into perspective. Take China, for example: it imported nearly three million barrels a day, whereas the United States, stimulated by strong economic growth, imported thirteen million³. There were several reasons for the market imbalance in 2004:

- ◆ Production in Venezuela, Iraq and Nigeria never returned to previous levels
- ◆ Spare capacity of other OPEC countries dropped sharply. This had a major effect on OPEC's regulating ability.
- ◆ Market psychology was basically bullish. On the supply side, possible geopolitical ruptures were anticipated (including in Iran) and everyone was very conscious of the spectre of geological peak oil. The damage caused in the US by Hurricane Katrina in 2005 showed that ruptures in supply can also be triggered by extreme climate events. On the demand side, it was estimated that the rise of emerging countries would mean sustained growth in demand.

In addition, unlike during the second oil crisis, the economic growth of major world regions (United States, Europe and Asia) was seemingly unaffected by uninterrupted price increases. OPEC – with its diminished means for action – was not inspired to act, as the ruptures in growth it initially feared did not materialise. There are three reasons for this new state of affairs:

- ◆ In 2004-2008, the world economy was far less "oil-intense" than during the first two oil crises. In 1980, about two barrels of oil were necessary to produce 1,000 dollars of added value; today half a barrel produces the same value. The economy and economic growth are therefore less vulnerable to oil crises.
- ◆ The process of opening up to the competition and developing exchanges has helped the move from a supply economy to a demand economy, with a gradual boost in consumer/client power
- ◆ Between 1980 and 2004, the international financial sphere expanded tremendously. Some petrodollars were spent in the real economy; others were recycled into the international financial circuits and fuelled the planet's financial growth.

The gradual increases in price between 2004 and 2008 – today referred to as a "third oil crisis" – was at first a purely physical crisis triggered by a imbalance, both real and psychological, between supply and demand.

1.1.3. Growing financialisation of commodity markets was expanding at the same time

The 2004-2008 period was marked by a profound structural transformation of the world's oil markets. The financial sphere grew astonishingly fast – according to operators, the financial markets for crude oil and petroleum products would today account for about thirty-five times more than the physical markets alone in terms of amounts of open positions. There are several reasons for this massive growth, not all of them oil-related.

³ The United States consumption of 20.6 million barrels a day represented about 25% of world demand for oil. For the first time, however, American demand for oil dropped in 2008.

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1.1.3.1. The upsurge in oil-related derivatives markets

Derivatives were created initially as response instruments to hedging. Their growth was facilitated as much through the creation of stock exchanges and exchange platforms as by the development of over-the-counter (OTC) derivative markets. The latter are especially attractive to the most sophisticated participants, but far from transparent⁴. Two other key factors were:

- ◆ Due to the intervention of indexed funds in particular (see below, part 1.2.2), commodity derivatives became a type of asset like any other, with arbitrages henceforth taking place between the various markets
- ◆ Low interest rates in the United States (and correspondingly of the dollar) during the period fuelled the rush for commodities, which were deemed anti-inflation products likely to offer a more attractive yield (or at the very least volatility) than traditional instruments.

It is nevertheless important to put commodities into perspective compared with financial markets as a whole. The two tables below show that, despite strong growth in recent years, the share of transactions and open positions in the commodity derivatives markets remained modest compared with the transactions on interest and exchange rate derivatives.

**Table 1: Transaction volumes in organised derivative markets
(futures and options)**

(million contracts)	2007	2008	% Variation
Shares	9 900.2	11 999.8	+21.2
Interest rates	3 745.2	3 204.8	-14.4
Currencies	459.8	577.2	+25.5
Commodities	1 395.3	1 825.4	+30.8
Other	26.1	45.5	+74.1
Total	15 526.6	17 652.7	+13.7

Source: Futures Industry Association

**Table 2: Notional amounts of open positions of financial institutions
on over-the-counter derivative markets**

(\$ billion)	December 2007	December 2008	June 2009
Shares	8 469	6 159	6 619
Interest rates	393 138	385 896	437 198
Currencies	56 238	44 200	48 775
Commodities	8 455	3 820	3 729
Credit default swaps	58 244	41 883	36 046
Other	71 194	65 413	72 255
Total	595 738	547 371	604 622

Source: Bank for International Settlements

⁴ The lack of transparency in relation to OTC market regulators is not specific to the petroleum product derivative markets. These were hugely complex, moreover, due to multiple time (between the various terms to maturity in forward contracts), geographical (depending on cargo delivery points) and inter-product (crude oil and refined products) arbitrage options.

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The rise in the financial sphere is clearly a fundamental structural transformation with a potential impact on the international oil industry. The nature of the third oil crisis differed from the first two. Given the volume of financial flows compared with physical flows (which is nevertheless not atypical compared with other commodity markets), it is perfectly legitimate to wonder about the role of financial fundamentals, just like the physical fundamentals, in oil price formation, especially since mid-2008.

1.1.3.2. Liberalisation of financial markets⁵

The easing of certain regulations has played a major role in the growth of the commodity financial sphere. The start point was the Commodity Future Modernization Act (CFMA) which itself was a follow-on to the repeal of the Glass-Steagall Act in 1999⁶. The CFMA, approved by Congress on 15 December 2000 and signed by President Bill Clinton on 21 December 2000⁷, introduced more flexible legislation. New financial agents, like funds indexed to commodities and financial institutions trading over-the-counter derivative instruments covering commodity prices (swap dealers), made access to the oil derivative markets easier. Some transactions in the oil derivative markets thus fell outside the remit of the American Commodity Futures Trading Commission (CFTC). The CFMA also eased the rules on fixed limits for short or long positions and made it more difficult for the CFTC to regulate the oil futures markets.

Hand-in-hand with these legislative changes, the CFTC gradually accepted a wider interpretation of the "*bona fide* hedge" rule, which initially only exempted the positions intended to hedge physical transactions from limits, by extending it to hedging "paper" positions taken by swap dealers in the over-the-counter financial markets.

1.1.3.3. Diversification of participants

A far wider variety of participants than previously has spread to the futures and options derivative markets: commercial and non-commercial traders, mutual funds, pension funds, banks, insurance companies, asset managers, hedge funds, private equity, swap dealers, index investors, etc. The emergence of these new participants has partially rendered the CFTC's traditional distinction between "commercial" and "non-commercial" agents irrelevant. Until very recently (August 2009) this was the basis for publishing the activity statistics of American futures markets:

- ◆ For the CFTC, a "non-commercial" agent is one that does not use oil futures contracts to hedge. The "commercial" agents seeking to hedge are typically producers and consumers of the physical commodity, who trade in futures to offset the risk of price change.
- ◆ Non-commercial agents seek profit by taking positions in the futures market in the hope of gaining from changes in price of the commodity; they have no interest in its physical delivery
- ◆ This distinction in fact covers two market intervention strategies: one focusing on risk management, the other speculative. This categorisation can cause difficulties:

⁵ See especially on these various points Medlock & Jaffe, *Who Is In the Oil Futures Market and How Has It Changed?*, Working paper, Rice University, USA, 2009.

⁶ By the Gramm-Leach-Bliley Act, November 1999.

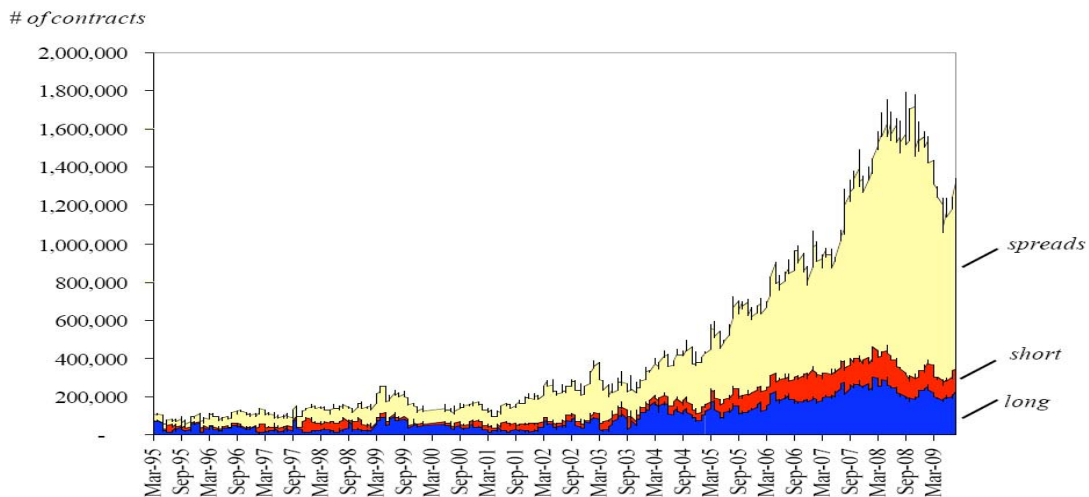
⁷ President Clinton signed this law just as he was leaving the White House. Note that at the time Enron still was a fully-operational, powerful lobbying force. It filed for bankruptcy in 2001.

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- First, it is based on an institutional approach, which forces the CFTC to state whether this or that participant is "predominantly" commercial or non-commercial, without being able to assess his motivations for a set transaction (or changes in them)
- Second, some financial participants, such as swap dealers who hedge in the organised markets open positions traded in the over-the-counter markets (with corporate or purely financial entities), are deemed commercial agents (see below, part 1.2.2)

The non-commercial agent category has therefore seen far greater growth in activity in the oil futures markets in the United States⁸ than the traditional commercial agent category: the former accounted for over 50% of open positions⁹ in the oil futures markets in 2008, against 20% before 2002. Taking reasoning to the extreme, this proportion today exceeds 80% when these data are reprocessed by combining swap dealers with hedge dealers and floor brokers/traders, who are normally non-commercial players. The entrance of non-commercial agents in the oil markets can thus explain the large increase in open positions in the oil futures markets. This entrance also coincides with increasing oil prices and the end of the much talked-about OPEC range.

Graph 2: Open positions of non-commercial traders in the NYMEX WTI contract



Source: Commitment of Traders Report, CFTC

Thus, the sphere of financial markets, all products together, has grown very rapidly over the last ten years, particularly since 2004. This growth has been fuelled by increasingly sophisticated tools and greater numbers of standardised products, as well as electronic exchange platforms, price indices and baselines in a context of deregulation and liberalisation.

⁸ To this can be added arbitrage strategies combining oil price and dollar exchange rates, which were made far easier by the move to electronic futures markets and the resulting algorithmic trading. Oil imports by the United States in 2008 represented \$331 billion, i.e. 47% of the trade deficit (against 19% in 2002). The correlation between the price of oil and the value of the dollar increased from 0.08 in 1986-2000 to 0.82 between 2001 and 2009.

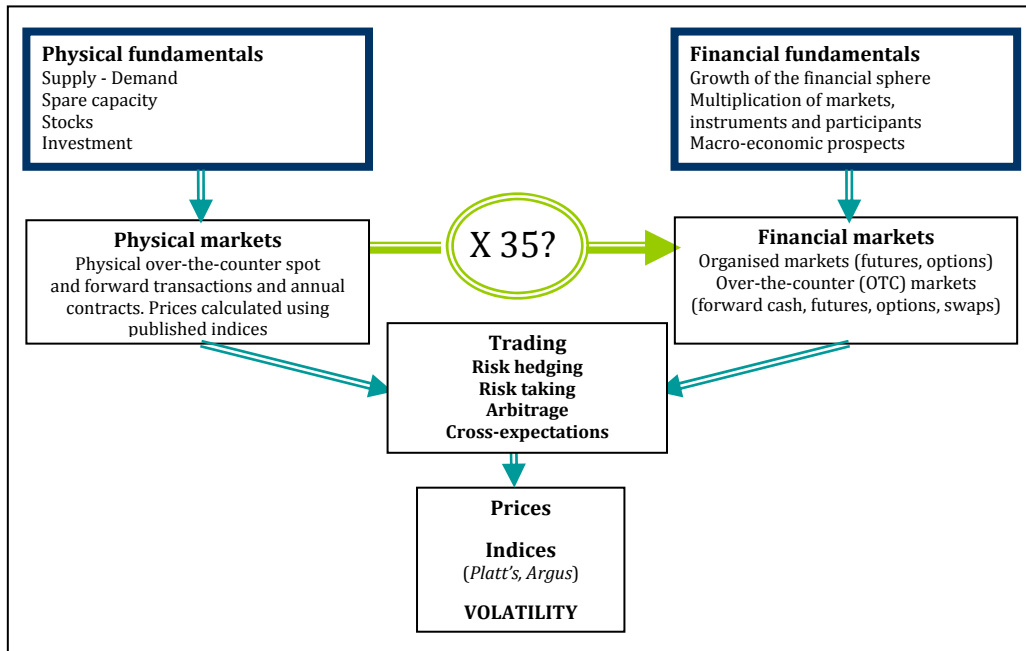
⁹ The open position is defined as resulting from the number of open contracts (long positions and short positions) characterised as "active" at instant t.

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1.1.4. New mechanisms for determining the price of oil have gradually appeared

The following graph attempts to explain how the price of oil is determined today. Distinction must be made between two categories of fundamentals: those associated with the physical markets and those governed by the financial sphere.

Graph 3: Oil markets



Source: Mission

The physical fundamentals relate to the state of supply and demand. They must be understood dynamically, by assessing the current situation and the prospects for change:

- ◆ On the supply side, we are concerned with the economic and technical conditions of current and future production, the state of reserves and how to recover them, the production capacity of oil fields (which is one way of modulating the supply as was done between 1999 and 2003), the investment requirements and the actual flows. Supply security and the geopolitical or climate events likely to disturb it must also be taken into account.
- ◆ On the demand side, attention focuses on its dynamics: the demand for petroleum products has perhaps already peaked in some OECD countries, but what will be the demand dynamics of emerging countries that overcome the crisis quicker? How can the increasing consideration of environmental and global warming factors alter the dynamics of world demand? This explains why the OPEC countries are increasingly concerned by the security of the demand they are receiving.
- ◆ Lastly, the question of stocks must be examined. How are they measured? How useful are they economically and geostrategically? How are they financed?

The information on all these physical elements is very incomplete and sometimes biased. Some participants find a clear understanding of physical fundamentals an advantage in a general situation of information asymmetry¹⁰.

The *financial fundamentals* go far beyond the oil markets as they belong to markets as a whole. There are several types:

¹⁰ See on this point the Joint Oil Data Initiative (JODI) discussed in the second part of the report.

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- ◆ Traditional financial determining factors, also assessed dynamically: interest rates, exchange rates, international liquidity levels, etc.;
- ◆ Multiplication of instruments which can be used in the financial markets and the diversification of participants;
- ◆ Behaviour of these participants whose profits come from the price deficit, the volatility and spreads;
- ◆ Growing interdependency between the various markets and various types of assets, with participants arbitraging on both spatial and temporal differences in valuation. The result today is that the oil markets are just one type of asset competing with all the others;
- ◆ Effectively, a growing correlation between the different financial markets, notably due to the asset management allocation strategies (see part 1.2.2 below), even if the level (or direction) of these correlations can vary over time¹¹.

The physical and financial fundamentals give birth to two types of market: physical markets and financial markets. The first operate at the speed of a tanker (except when expectations change abruptly, like in the second half of 2008), the second to the nanosecond:

- ◆ *Physical markets.* These involve the purchases/sales of different qualities of crude oil and refined products agreed over-the-counter. They are formed by transactions traded on a daily basis for spot¹² or forward¹³ delivery and futures contracts for variable periods (often one year) which are based on price formulas linked to changes in market conditions for a reference period agreed contractually (market-related price formula)¹⁴. This type of contract mainly involves the petroleum operators for their production, refining and distribution operations and the manufacturing and commercial companies purchasing petroleum products. The volume of these physical markets is just about the annual oil production/consumption, some 85 million barrels a day in 2009. Some of these physical crude oil transactions are known and provide information to publishers such as *Platt's* or *Petroleum Argus*, so that they can assess the qualities of crude oil traded compared with the futures contracts on the Brent or WTI. The central market in Europe for refined products is barges traded in the Antwerp-Rotterdam-Amsterdam (ARA) zone, where the quotations, also established by *Platt's* or *Argus*, serve as a reference for determining both physical prices and derivative instruments.
- ◆ *Financial markets.* These cover the derivatives (futures, options, swaps) and transactions that are traded in either organised or over-the-counter (OTC) markets. The two main standard futures contracts offered by the organised markets are WTI (West Texas Intermediate) light crude and the Brent¹⁵. The American CFTC and the British Financial Services Authority (FSA) control the operation of two main organised markets:

¹¹ As for the dollar exchange rate and the price of oil.

¹² A spot contract is the purchase of a certain quantity of products delivered to a given location on a given date in the month and at an agreed price.

¹³ A forward contract is a purchase for future delivery of a physical quantity of products. This contract in particular forms the link to the financial futures contracts which, with some exceptions, are not settled in kind.

¹⁴ The price formulas normally refer to a *Platt's* type spot quotation on the nearest reference product (dated Brent or cash BFOE in Europe, cash WTI, Light Louisiana Sweet or Mars in the United States), with an added differential depending on the product itself and its delivery location.

¹⁵ The West Texas Intermediate is an American light crude oil. The Brent is a North Sea deposit; its oil is representative of the crudes produced in this region. Note that the quantities of WTI and Brent actually produced are derisory compared with the volume of transactions. Both these quotations are in fact benchmarks for the other transactions in other crude oil qualities.

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- WTI futures contracts have been quoted on the New York Mercantile Exchange (NYMEX) since 1978. This is now a division of the Chicago Mercantile Exchange (CME). This is by far and away the most liquid market, with 134 million contracts of one thousand barrels exchanged in 2008 compared with 71 million in 2006.
- Brent futures contracts were historically quoted in London on the International Petroleum Exchange (IPE). This was bought out by the Atlanta electronic market, Intercontinental Exchange (ICE). ICE also offers WTI contracts.

**Table 3: Changes in the number of contracts negotiated
in the organised petroleum derivative markets**

(in thousands of contracts)	2004	2008
Chicago Mercantile Exchange (CME)		
▪ WTI oil	52,883	134,673
▪ US natural gas	17,442	38,731
▪ Heating oil	12,885	19,553
▪ Unleaded gasoline	-	20,523
Intercontinental Exchange (ICE)		
▪ Brent oil	25,458	68,368
▪ WTI oil	-	51,092
▪ Diesel	9,358	28,805
▪ Europe natural gas	619	1,263
Japan		
▪ Gasoline	15,870	1,746
▪ Kerosene	15,455	1,431
Shanghai		
▪ Fuel oil	5,637	61,121

Source: Cyclope Report 2009 on the commodity markets, editions Economica.

An attempt at a futures contract on Dubai crude failed in Spring 1990 (IPE Dubai contract). The Dubai Mercantile Exchange, supported by Gulf producing countries, subsequently attempted to create a futures contract benchmarked on the crude oil from Oman.

The organised markets centralise transactions. Their outstanding feature is price transparency.

Outside organised markets, transactions on derivative instruments are agreed under private over-the-counter trading aiming at more subtle risk hedging. This market has expanded considerably in the last ten years. The expansion of OTC markets has made the overall picture more complex and raises the question of their interaction with the organised markets. This interaction takes place especially by developing swap dealer activities (see part 1.2.2 below).

Physical and financial markets combine to give rise to both physical and financial trading, with the financial being by far the most dominant quantitatively in recent years. The vast numbers of participants in these markets can have a variety of objectives, potentially broken down into several categories:

- ◆ Hedging for the "commercial" players looking to protect themselves against the risks of price variations
- ◆ Positions taken by floor traders/brokers or hedge funds: normally defined as financial or commercial transactions that profit from market fluctuations by anticipating price changes to increase the value; they have always been inherent to the markets. They assume therefore some risk taking. The term "natural speculation" can be used, without a negative connotation.
- ◆ Arbitrage, which reflects the systematic search for differences in valuation in space, over time and between different products

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- ◆ Diversification of portfolio risks which prompts some investors, particularly through index funds¹⁶, to take long positions, called long only, on a permanent basis in commodity baskets

The common denominator of these objectives is the use of available financial instruments, the creation of new tools to achieve the objectives sought in the best possible way which combine risks and profits in varying degrees of sophistication – basically, "market intelligence". The border between these different objectives may be clear to the participants involved, but not necessarily to the units regulating them, all the more so as the financial markets in oil are connected to other commodity markets and all the other types of asset. In addition, the CFTC distinction between commercial and non-commercial operators is open to debate: for oil, for example, when chartered rates are low, some purely financial participants have acquired physical storage facilities on land or even at sea. Conversely, some major "physical" traders take positions in the derivative markets which go far beyond simple hedging to manage the risks.

The world spot price for oil is currently based on the WTI price and more marginally the Brent price in the futures markets. The key in determining the price is the expectation by professionals and investors of what the balances between supply and demand will be tomorrow. These expectations are made more difficult by the complex physical relationships between the quality of available crude oils, the structure of the final demand (gasoline, diesel), refining flexibility and stock levels. Participant behaviour in these markets is based on risk hedging as well as price deficits and volatility under a speculative approach. The issue is not to judge, simply to observe that this speculation has its roots in the very structure of markets which are themselves bearers of volatility.

The question is knowing at what point and for whom this volatility can be good or bad and how we can be persuaded to act.

1.2. Continuing oil price volatility could be on the cards in the foreseeable future

Care is essential when defining the notion of volatility: it can be determined on an intra-daily, inter-daily, weekly, monthly or annual basis (be it based explicitly on historical data or implicitly on the price of options). Volatility is examined at two levels under this report: its role in the interaction between the physical and financial markets and its scale, reflected by the fluctuation in international prices, whenever scale seems to have a strong impact on the world economy and calls on governments to intervene.

Box 1: Volatility defined

"There are various ways of defining volatility. The simplest notion is historical volatility. This is calculated on the basis of fluctuations in past prices, over a certain period of time. When actively-traded options are present, another volatility – normally called implied volatility – can be calculated. This relates to the standard deviation of price fluctuations used to level out the option's market price and theoretical price (from a model).

Unlike historical volatility, which includes only past information, implied volatility reveals operator expectations for future volatility, pending information available at a given moment. This is essential information for it estimates how the operators assess the risks (present and future) associated with the positions held in the market"¹⁷.

¹⁶ The two main commodity indices are the Goldman Sachs Commodity Index (GSCI) published by Standard & Poors and the Dow Jones-AIG Commodity Index.

¹⁷ Source: Lautier and Simon, *Les marchés dérivés énergétiques* (The energy derivative markets), The new energy challenges, Economica, 2009.

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In this section we shall examine events in 2008-2009 in an attempt to show how the financialisation of oil markets forces the new price determination mechanisms to lead to persistent volatility.

This volatility is not, however, independent of physical fundamentals. It can also be affected by market power phenomena linked to the very high number of participants¹⁸.

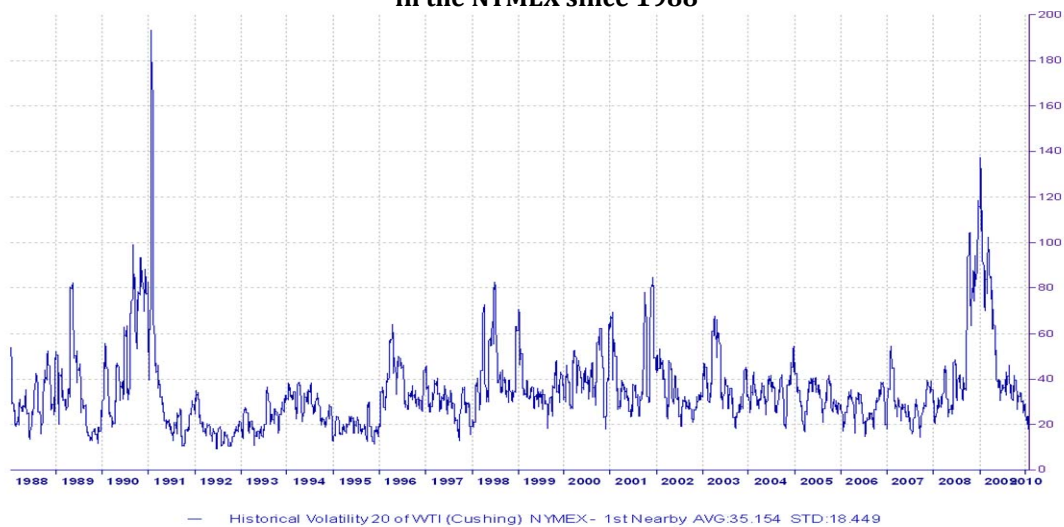
1.2.1. Increase in volatility since 2008

The price series of WTI oil quoted on the NYMEX features tremendous recent volatility, as shown in Graph 4 below. Analysts have paid special attention to the trend rupture identified between March and August 2008, the market reversal in the second half of 2008 and the gradual upswing of prices from February 2009 onwards; in principle, the physical fundamentals alone do not seem to be able to explain these changes fully.

Although the average barrel price was \$32¹⁹ between 1988 and 2009, it reached a height of \$145 on 3 July 2009 before falling back to \$36 in December 2008 and then rising to \$70-80 at the end of 2009.

The twenty-day volatility was held above 80% throughout the period, with many peaks above 100%. A similar level had already been reached in 1986 (when administered price systems for crude were abandoned) and 1991 during the First Gulf War.

Graph 4: Historical twenty-day volatility of the WTI crude oil price (1st term to maturity) in the NYMEX since 1988



Source: Mission

Another way of assessing this volatility, this time at very short term, is to note the absolute day-to-day variations in WTI prices and the scale of intraday fluctuations: in this respect the 2008-2009 period appeared exceptional²⁰.

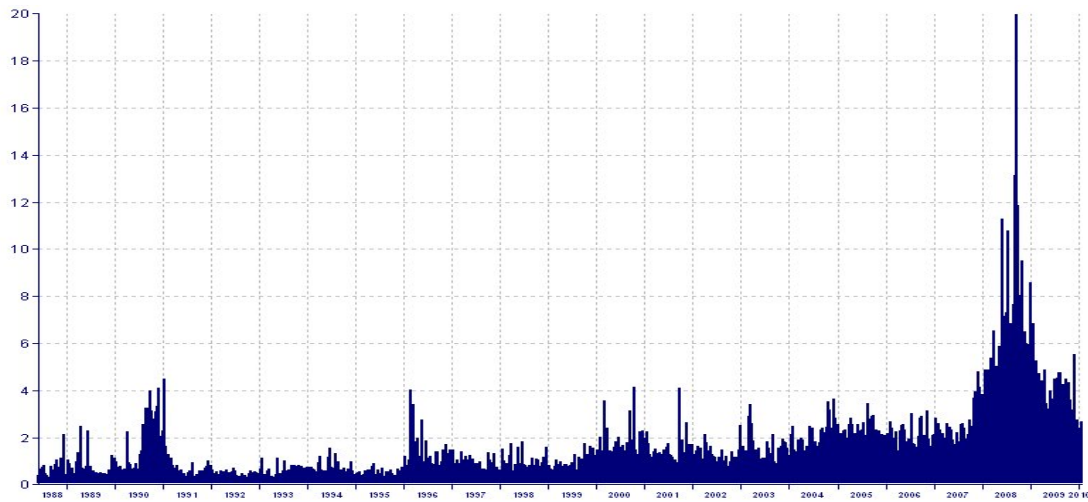
¹⁸ See on this point Part 3 of this report.

¹⁹ WTI NYMEX quotation, first term to maturity.

²⁰ Appendix III of the report discusses these analyses in greater depth. It shows that the "conditional" volatility of crude oil prices (the volatility on a date t is assumed to be conditioned by the volatility of prices on previous dates and the trend ruptures can thus be analysed) has never been as high as in 2008-2009.

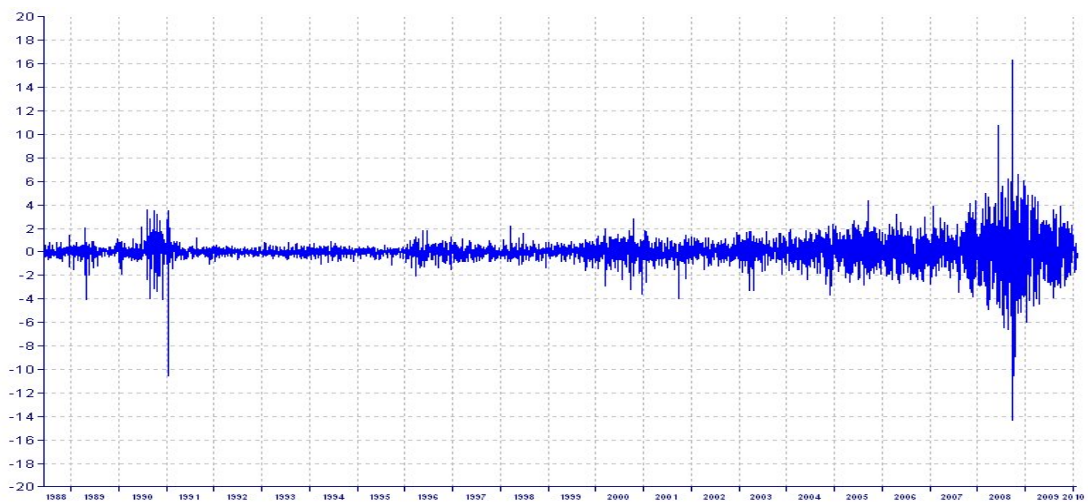
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Graph 5: Daily variation in closing prices of WTI crude oil (1st term to maturity) in the NYMEX since 1988 (\$/barrel)



Source: Mission

Graph 6: Daily fluctuation range of WTI crude oil prices (1st term to maturity) in the NYMEX since 1988 (\$/barrel)



Source: Mission

Should we perhaps talk about "excessive" volatility of oil markets in relation to criteria normally adopted for financial analyses? There is nothing to confirm this.

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Box 2: "Excessive" volatility

The notion of "excessive" volatility is difficult to use in finance, as it implies establishing a reference scenario against which the price fluctuation of an asset seems "normal". The study by Dumas, Kursheve and Uppal²¹ examines this question in the light of share markets in the United States. In this context of behavioural finance, an asset can be made to fluctuate excessively by irrational market "sentiments". Apart from the initial contribution by Shiller²², there is no body of theory explaining the best potential response by rational investors on the allocation of their wealth. The study mentioned above identifies another category of investor: "irrational" investors who cause the "excessive" volatility of the asset in question. Investors can study the asset's historical performances and thus identify periods of excessive volatility during which they can adapt their expectations rationally: the effects of rational learning identified especially by Timmermann²³ can also be highlighted. Only traders with the most precise expectations "survive" (in terms of accumulating wealth) in the long term, therefore. The study found that rational investors end up pushing the irrational investors out of the market, but that this is a fairly lengthy process.

Many commentators still rate the 2008-2009 period as unusual:

- ◆ Oil prices had never known directional movement on such a scale in such a short period
- ◆ Whereas the previous high-volatility episodes had been associated with major structural transformations or geopolitical crises, this was not true in 2008-2009, despite this period coinciding with accentuated fragility of the main financial marketplaces

1.2.2. Transformations of financial markets fuelling the natural volatility of oil markets

Since the initial work by the IMF in 2008 at the request of the G20 and by the American inter-agency task force (IATF) led by the CFTC²⁴, both of whom concluded on a lack of causality (rather than correlation) between the growth in volumes in the oil product derivative markets and price volatility, a great many studies, some by investment banks or oil operators, have expressed far more subtle views on this issue.

The emergence of new participants in the oil markets, the very fast development of volumes negotiated in the commodity futures markets and the increase in over-the-counter transactions mentioned above are all elements likely to amplify the "natural" volatility of oil prices resulting from the dynamics of physical fundamentals.

²¹ Dumas, Kurshev and Uppal, *What can rational investors do about excessive volatility and sentiment fluctuations?* Swiss Finance Institute Research Paper, 2006.

²² Robert J. Shiller, *Do stock prices move too much to be justified by subsequent changes in dividends?*, American Economic Review, vol. 71/31, 1981.

²³ See especially Timmermann, *How learning in financial markets generates excess volatility and predictability in stock prices*, Quarterly Journal of Economics, 1993.

²⁴ See especially the IMF's *World Economic Outlook* of October 2008 and the *Interim Report on Crude Oil* by the IATF in July 2008.

1.2.2.1. The increase in open positions and lengthening of maturity of contracts means that long-term expectations can be incorporated in spot prices

The best-documented study to date was commissioned by the CFTC in 2008 from researchers with access to a non-public database on the positions of various types of participant in the regulated futures and options markets for petroleum products²⁵.

This study identifies structural changes in the relationship between the oil market forward contracts with various maturities:

- ◆ In fundamentals
- ◆ In the term structure
- ◆ In the diversification of participants operating in the forwards markets

It highlights substantial growth in open positions (long and short) in futures contracts based on the NYMEX WTI, which increased by an average of 10% between 1995 and 2008. These positions and those recorded in the WTI and the ICE Brent contracts together total more than \$200 billion in open positions in futures, valued at the spot price (and not at the notional contract price), in June 2008 and \$430 billion when the options negotiated in these same contracts are added. These amounts account for about 5% of the annual crude oil production worldwide (compared with 2% in 2000).

Table 4: Total of open positions in the crude oil futures markets

	Futures		Futures and options	
	(millions of barrels)	(\$ billion)	(millions of barrels)	(\$ billion)
June 2000	517	16.0	724	22.5
June 2004	761	28.1	1,163	42.9
June 2008	1,441	202.5	3,068	431.2
December 2008	1,374	58.5	n.a.	n.a.

Source: Above-mentioned studies by Büyüksahin and Parsons.

As indicated above, the open positions in the organised markets are only part of participant exposure in the oil markets, given the number of over-the-counter transactions. Several operators feel these figures should be tripled or quadrupled to assess the total volume of open positions²⁶.

The most striking fact over and above the increase in volume of open positions is the significant lengthening of the futures term structure, with the gradual connection of futures contracts with different maturities; until 2001-2004 these contracts were valued and traded as in the segmented markets:

- ◆ In 2000, the volume of NYMEX WTI contracts for three-year or more terms to maturity (futures and options) was less than 3% of all open interest positions. Today it is over 6%.
- ◆ Although the open interest positions in long-term maturities have grown twice as fast as in short-term maturities. Less than one year maturities nevertheless account for the bulk of volumes (over 70% of open positions).

²⁵ Büyüksahin *et alii*, *Fundamentals, Trader activity and derivative pricing*, SSRN working paper, 2008. This study, supplemented by the work by Parsons (*Black Gold & Fool's Gold: Speculation in the Oil Futures Market*, CEEPR, MIT, 2009) served as a basis for the IATF report mentioned previously.

²⁶ i.e. therefore a total amount of open positions in the order of \$600 billion to \$800 billion. This figure is globally consistent with the BRI figure for the marking-to-market of commodity derivatives, estimated at \$2,200 billion in mid-2008. Oil derivatives account for an estimated 40% approximately of this total.

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This growth in the number of open interest positions and the lengthening of negotiated maturities have together helped to diffuse changes in market participant expectations in the entire futures curve: until recently, the volatility in the longest term to maturity only marginally affected the price of the shortest term, but this is no longer the case²⁷.

1.2.2.2. Swap dealer and indexed fund strategies have accentuated volatility throughout the futures curve

The increase in financial participants in the commodity futures markets since the start of the decade has been mentioned above (see part 1.1.3). The strategies developed by the main participants in the oil derivative markets are as follows:

- ◆ Swap dealers are most frequently investment banks acting as counterparty, in the over-the-counter markets, to corporates seeking to cover their exposure to the "physical" oil²⁸ or financial investors who take a directional position, normally long, in all the terms to maturity of the futures curve. They hedge their position themselves, either with "commercial" participants negotiating physical oil products²⁹ or with other financial investors (hedge funds focusing on long/short strategies) and, for the balance, in organised markets for the shortest terms to maturity which offer the greatest liquidity. This explains why the CFTC has agreed to swap dealers being considered as "commercial" participants and therefore exempt from transaction limits in the organised markets³⁰: in fact, strictly from their order book perspective, they hedge for third parties. Conversely, from the market perspective, they take speculative positions;
- ◆ The hedge funds category groups a wide spectrum of participants but their identification by the CFTC³¹ remains unclear. They are today major sources of liquidity in the futures markets, holding nearly 23% of open positions in 2008 against less than 6% in 2000. Although it is impossible to assess their net position in the markets (long or short) using the CFTC-published data, their strategy is normally long/short (hence their essential role in spread trading) and their interventions are distributed throughout the futures curve.

²⁷ See Lautier and Parsons studies quoted previously.

²⁸ Typically, an airline which wishes to buy a "long" paper position.

²⁹ For example, an independent oil producer or trader prepared to take a "short" paper position.

³⁰ This exemption has been under discussion since 24 March 2009 according to the CFTC communication "*Concept release on whether to eliminate the bona fide hedge exemption for certain swap dealers and create a new limited risk management exemption from speculative position limits*". The new rules suggested by the CFTC on 14 January (see parts 2 and 3 of the report) respond in part to this.

³¹ Within its proprietary identification system, the Large Traders Reporting System (LTRS).

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- ◆ The most significant innovation in recent years is the growing importance of index funds in the commodity futures markets (including oil); this has helped substantially in turning an investment in these markets into a type of asset just like bonds or shares. These changes, using the GSCI and DJ-AIGCI indices mentioned above, are primarily a desire by portfolio managers to diversify their investments over a wide spectrum of assets to maximise their yield whilst minimising their risks through this diversification. Originally designed as a passive strategy³², index management has taken on an active dimension in recent years, especially in the oil markets, as the weighting of miscellaneous commodities comprising the index can vary according to expectations of the yields offered³³.
- ◆ Special mention must be made of index funds negotiated permanently in the financial markets (exchange traded funds (ETF) and exchange traded notes (ETN) which have expanded recently in commodity markets. Small investors, and therefore private individuals, can henceforth invest in them simply and at minimum cost, but not without risk³⁴.

It is however difficult to assess the volume invested in the oil markets by the index funds. The CFTC gave an estimation in June 2008 of \$51 billion on the NYMEX WTI contract (i.e. 28% of the total open positions). Other sources³⁵ estimated \$120 billion to \$130 billion on the NYMEX and ICE WTI and Brent contracts (i.e. 62% of open positions in futures alone or 30% with the addition of the optional component). LCM Commodities maintains that at the end of 2008 these amounts had dropped back to about \$20 billion, due as much to the fall in oil prices as disinvestments by these funds, an estimated \$50 billion.

In this respect, a very well-documented study³⁶ examined the "financialisation" process of commodity markets precipitated by the rapid growth of index funds since the 2000s. Its authors highlight the relationship between the growing involvement of investors in such indices and the crises suffered by the commodity markets, with the oil market in the front line. They show that the interactions between the financial markets and the commodity markets are gaining in importance and that the recent financial crisis has made a significant contribution to increasing the price volatility of commodities in 2008, in a number of ways:

- ◆ the sensitivity of indices like the GSCI or the DJ-AIGCI to impacts from the share markets and the dollar exchange rate increased significantly after 2004;
- ◆ the growing exposure of energy sectors like oil to these same impacts (share market, dollar/euro exchange rate) is in major part linked statistically to the presence of commodity index funds;
- ◆ the impacts affecting commodity markets other than oil are linked directly to changes in both share markets and the oil market, causing spillover effects.

The oil "paper" market has thus lost its initial specific role of hedging instrument for professionals over recent years and become a financial market like any other.

³² In the sense that the manager does not care whether the underlying price is too high or not high enough, he is simply seeking an exposure to the market price.

³³ Oil futures markets stand out in this respect: until end 2004, they experienced backwardation, with the futures price lower than the spot price. An asset manager who "rolled over" an investor's position month after month could gain, even if the spot price fell. This explains the initial success of funds indexed on the petroleum products.

³⁴ As a rough guide, the report of the IEF group of experts quotes the case of the United States Oil Fund (USO), the largest ETF invested in WTI oil, which lost 60% of its value between its launch in April 2006 and October 2009, whereas the price of crude rose from \$68 to \$78 a barrel in the same period.

³⁵ Parsons study mentioned previously, work by Master and White *"The accidental Hunt brothers – how institutional investors are driving up food and energy prices"*, 2008, LCM Commodities statistical data.

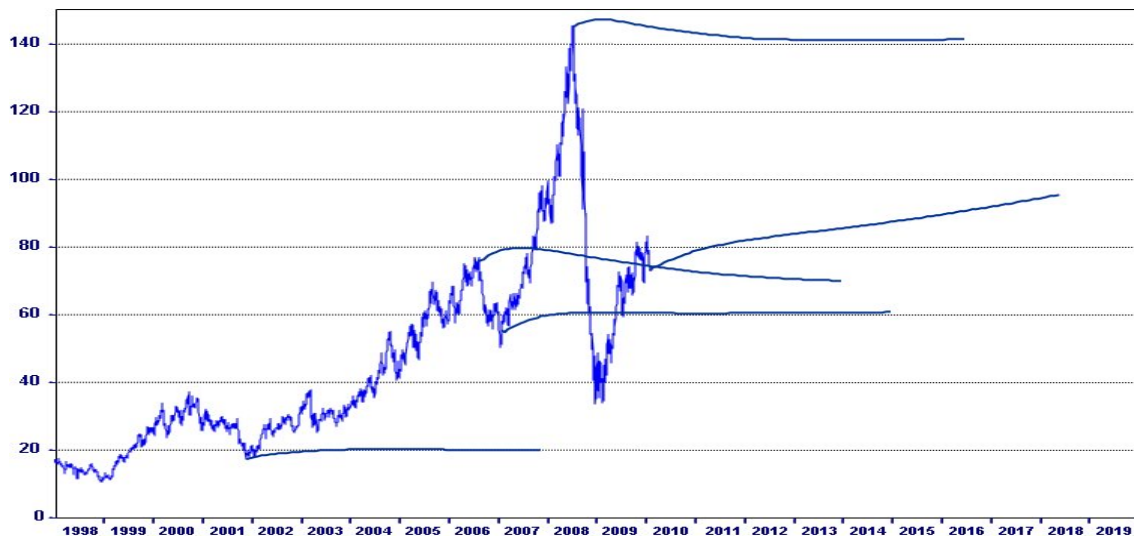
³⁶ Tang and Xiong, *"Index investing and the financialization of commodities"*, Princeton University, 2009.

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Regardless of the precise volume of interventions in the oil futures markets (regulated or OTC) of swap dealers, hedge funds and other indexed funds, they have made a major contribution to fuelling the liquidity of the market in recent times. They helped fuel the volatility in the most forward term through the positions they took in the entire futures curves. This was added on to the volatility of short-term futures and of spot prices³⁷.

The deformations seen recently in the futures curve are most enlightening, as shown in the graph below: the exceptional volatility of long-term expectations of oil prices (rational or otherwise) has accentuated spot price variations by gambling with mechanisms, as described earlier.

Graph 7: Changes in WTI crude oil prices (1st term to maturity) and positioning in the futures curve (\$/barrel)



Source: Mission

1.2.2.3. The arbitrageurs have to a certain extent provided the link with the physical markets

Despite the active involvement of many financial institutions in the physical petroleum products market through their control of storage and even transport facilities, the futures or options markets are most natural path for a speculator to invest in this type of asset, which does not mean delivery of the product itself. The long positions they take have ultimately to be hedged, usually by holders of petroleum products or possibly by arbitrageurs.

Arbitrageurs, who have no absolute speculative position, exploit the difference between the spot price and the futures price by purchasing and storing the physical product and selling it on to investors under a futures contract. The arbitrageur can expect to make a profit as soon as the interest and storage charges and the insurance premium drop below the differential between the futures price and the spot price.

³⁷ See especially on this point the study by J. Parsons mentioned previously.

Boxed section3: Links between the futures price and the spot price

The futures price and the spot price of goods underlying a futures contract are closely linked. The futures contract at a set date requires the delivery of a quantity of commodities (underlying). In theory, to be able to deliver the underlying asset at maturity, the forward seller borrows the sum required to purchase it and reimburses it at maturity. The physical holding of the underlying asset incurs storage costs, but it also yields a gain from the storage opportunity when the supply-demand balance is uncertain. This yield will tend towards zero when the market expects a sufficiently abundant supply at maturity. Where there is no opportunity for arbitrage, the contract value, which corresponds to the sum received for the sale of the underlying asset, is enough to reimburse the principal and interests of the loan along with the storage costs less the convenience yield. Thus, insofar as this relationship is satisfactory, the factors influencing the forward prices also affect the spot price of the underlying asset³⁸.

Since 2005, and more especially in the first half of both 2008 and 2009, the oil markets were marked by a major contango effect, with the prices for one- to six-month maturities notably much higher than the spot prices. The arbitrageurs were able to offer paper oil to investors, avoiding a massive surge in prices in the shortest terms to maturity of futures contracts. This phenomenon was accentuated recently by falling freight tariffs, paving the way for significant floating storage capabilities in the market: an estimated 130 million barrels of crude oil and petroleum products, or more, are stored at sea, with an additional storage capacity of 180 million barrels available in the short term³⁹.

The global physical stock statistics - incomplete and known belatedly - are however incapable of identifying clearly the result of the strategy by arbitrageurs, especially during the first half of 2008, by producers wishing to hoard part of their oil or by consuming countries (OECD member countries and China in particular) which were starting to build up stocks from the second quarter of 2008 onwards.

The stabilising role of arbitrageurs in the organised markets and more generally of commercial participants with access to the "physical" is limited nevertheless by their ability to finance not just the purchase of the oil on the spot market but also the margin calls by the NYMEX and the ICE in the futures contracts they are selling, since the prices continue to rise. The crude oil price peak in July 2009 could therefore be partly due to balancing constraints of these operators, which could no longer act as counterparty for financial investors wishing to hold long positions⁴⁰. An identical phenomenon was noted in 2009; here new storage capacities, especially at sea, limited the effects.

³⁸ In practice, the underlying asset is rarely delivered and transactions are most often terminated by cash settlements.

³⁹ Source: Deutsche Bank, *"The peak oil market"*, October 2009.

⁴⁰ See on this point the analogy with the situation in the American cotton market, studied by the CFTC (*Staff report on cotton futures and option market activity during the week of March 3, 2008*, published in January 2010).

1.2.3. There is nothing to keep the 2008-2009 episode from recurring

1.2.3.1. The mechanisms in play in the futures market partially explain the events of 2008-2009

The elements discussed above show that the debate on the link between financial investor actions in the oil markets and price movements in these same markets is far from being as clear-cut as thought in the first studies by the CFTC and IMF, which concluded that these interventions did not cause the volatility. Apart from the studies by Parsons, Master & White and Tang & Xiong quoted above, in-depth econometric work has shed new light on this question⁴¹:

- ◆ Hamilton⁴² emphasises the role of speculation in explaining the impact of the 2008 crisis on the price of oil and the subsequent plummeting prices. By taking a long position in the futures contracts and selling them a few weeks prior to expiry, a speculative strategy re-uses these gains in a sequence of successive positions. Investors benefit from this sequence when commodity prices rise, as they do not have to worry about the physical issuing of contracts. When the purchase of the forwards contracts exceeds the resale of expired contracts, this "financialisation" of the oil market forms a speculative bubble, with a rise in the price of futures and the underlying spot price.
- ◆ A recent UNCTAD report⁴³, adopting similar reasoning to Tang & Xiong, has shown the strong interactions which now exist between the theoretically non-correlated markets like commodities or shares that it attributes to the action of index funds. It concludes that the volume of interventions by these funds in relation to the size of commodity markets involved, and given that their decisions are not based on an expected balance between supply and demand, means that the futures markets can no longer operate efficiently by contributing to the "price deficit" process. These investors thus help increase volatility which is detrimental to the participants negotiating the physical, who could no longer have acceptable cover.
- ◆ A Bank of England report⁴⁴ gave a full and recent statistical analysis of potential causes of the March-August 2008 crisis in the oil market. This report starts from CFTC-published data on the long position of non-commercial traders in 2003-2006 and 2006-2008 before drawing the very prudent conclusion that it is impossible to eliminate the hypothesis of speculative bubble when explaining the oil price dynamics in 2008 and highlighting the inherent limits in using CFTC-published data. This study underlines therefore very clearly the advantage in accessing the Commission's confidential data on investor positions, thereby identifying flows from the various traders more accurately.
- ◆ A Deutsche Bank study⁴⁵ concludes that there was just as much causality link between the net position of non-commercial traders in the NYMEX WTI futures market and the price of crude oil in the spot market before and after the 2008 crisis, without for all that offering an opinion on speculator motivation in accumulating such positions

⁴¹ Appendix IV to the report presents these studies in detail.

⁴² Hamilton, "Causes and consequences of the oil shock 2007-2008", Brookings papers on economic activity, 2009.

⁴³ CNUCED-UNCTAD *The global economic crisis : systemic failures and multilateral remedies*, Chapter III, 2009.

⁴⁴ Saporta, Trott et Tudela, "What can be said about the rise and fall in oil prices?" Bank of England Research and Analysis Report, 2009.

⁴⁵ Its authors also mention a memo from the British Cabinet Office (2008), suggesting that "without the major financial flows in the oil futures markets, the prices may not have risen then fallen so radically in 2008".

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- ◆ Lastly, in line with the thinking of the Working Group, a Total Trading study⁴⁶ shows a causality link between the variations in financial institutions' weekly positions in the NYMEX WTI contract and the prices in this same market, despite the limited nature of available statistical sources

A reasonable conclusion drawn from these miscellaneous studies is that the volume of interventions by financial investors, especially commodity index funds acting passively, has helped emphasise volatility throughout the futures curve, with this volatility being felt in the shortest terms to maturity in the spot price with swap dealer engineering, gambling by arbitrageurs and the contribution by publishers of "physical" quotations.

1.2.3.2. They could help emphasise the natural volatility of oil markets in the future

The links appearing over the last few years between the miscellaneous financial markets and new correlations are here to stay: the most recent example is the rise in crude prices in the first half of 2009, attributed by very many participants to the weakness of the American currency. This can be assessed from two angles:

- ◆ A low dollar means cheaper oil in Europe and therefore increases demand (thereby playing on the physical fundamentals)
- ◆ Conversely, the fears of inflation in the United States (which weaken the dollar) can encourage investors to buy oil (as speculation or to hedge against inflation)

Similarly, the rise in crude prices in 2009 can be explained by the rise in share markets (speculative factor made easier by a gradual return to risk-taking in a context of abundant liquidity), as by the perception of a rapid winding down of the crisis (fundamental factor).

Any view we may take on whether or not the 2008 events were exceptional comes from analysing the motivations of financial investors. Because they are free of all physical market restrictions, they alone are capable of incorporating information on the future in oil prices, which physical traders also find essential⁴⁷:

- ◆ Either financial investors make up their minds rationally based on their estimated long-term balance between supply and demand: by making prices rise today because they expect a shortage tomorrow, they actually give producers and consumers the means to avoid this shortage. In this sense they have a "healthy" role.
- ◆ Or, when they invest simply to diversify their portfolios, without taking a view on the direction of the market and therefore without rationality specific to the oil markets, or when they follow an upwards or downwards trend (passive strategy magnifying a movement potentially causing a speculative bubble), the volatility they generate through the volumes of their transactions can be "harmful", especially when made easy by abundant liquidities
- ◆ These investors can admittedly find a counterparty in the "paper" market with the arbitrageurs, but their limitations were underlined above; they cannot "roll over" their short positions indefinitely nor face up to the excess demand for long positions, without raising the crude spot prices.

⁴⁶ Deutsche Bank Research, "Do speculators drive crude oil prices?", December 2009.

⁴⁷ Bouallai and Baule, "With the CFTC publication of disaggregated commitments of traders report are we in a position to better assess whether specific categories of oil futures market participants did cause the oil price moves we witnessed in recent years?" December 2009.

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In all likelihood, both these types of investor will continue to exist jointly in the commodity markets, especially petroleum products, in the foreseeable future. The lack of natural sellers – i.e. the major world producers – in the futures markets to balance the demand by financial investors is now proving a real problem and suggests that the volatility of futures and spot markets can only increase.

1.3. But physical fundamentals are still the decisive factors in determining oil prices in the medium and long term

We have seen that the behaviour of financial markets could influence the formation of spot prices. The early part of 2009 provides an interesting illustration, as price levels were maintained whilst the physical fundamentals were considered bad: exceptionally-high stock levels and spare production capacity, weak and uncertain demand dynamics.

Such distortion is possible in a relatively short period but, ultimately, the physical fundamentals reassert themselves, as the actual balance between firstly, the supply of crude oil and refined products and secondly, the demand for crude oil and petroleum products depends in the last resort on production, demand dynamics and stocks.

One variable plays a primordial role in creating this ultimate balance: the level and timetable of investments in exploration-production. The international oil industry makes a distinction between the question of the volume of confirmed and recoverable oil reserves and the problem of processing these reserves into production capacity. The level of investments dictates the processing directly. The economic crisis has had a very negative impact on the amount of investment into developing hydrocarbons and has exacerbated the potential uncertainties on expected changes in demand for oil and petroleum products. In addition, accelerated awareness of global warming problems brings further uncertainties. In the financial markets, where futures curves are supposed to reflect the physical futures market balance, the complexity of uncertainties and interdependencies are now likely to muddy this relationship.

*

This first section does not claim to present a full analysis of the operation of oil markets. There are still shadowy areas due to the tremendous complexity of mechanisms, the opacity of data and the huge difficulty in establishing robust and lasting quantitative relations.

Nevertheless, there is a belief that the financial fundamentals are just as responsible for the wide variations in oil prices in the 2008-2009 period as the physical fundamentals. This involvement by the financial factors is not in itself harmful. It may not necessarily last, for the physical fundamentals should normally act as a corrective force: insufficient physical supply faced by strong growth in demand or quite the contrary, physical limitations in storage capacities or unused spare capacity. There is clearly a complex dialectic relationship between the physical and the financial.

However, the growing price volatility seems inherent to oil market operation and there is reason to think that this volatility is mechanically persistent, all the more so as it forms the business of traders operating in the financial markets. This volatility, on an occasionally unpredictable scale, seems detrimental to both exporting and importing countries. It can have the effect of increasing the uncertainty and the risk and therefore of reducing the investment flows into the energy sector, purely oil-oriented investments or investments in alternative energies. This confirms the general feeling that oil prices are oriented upwards:

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- ◆ Exporting countries feature oil as a major contributor to their budgetary revenues, exports and gross domestic product. They therefore have to cope with volatile export revenues, which makes budget forecasts extremely difficult. They have to manage oil price volatility and exchange rate volatility. One potential result is increasing uncertainty for investors, preventing a balanced budgetary policy and putting the brakes on economic growth. Their short-term response is to put together conservative budgets, move any excess to reserves to deaden the impacts of price fluctuations and, in the longer term, diversify their economy.

Table 5: Share of oil and gas in budgetary revenues, exports and GDP of exporting countries (%)

	Algeria	Saudi Arabia	Iran	Kuwait	Libya	Nigeria	Norway	Russia	UAE	Venezuela
Budgetary revenues	76.3	89.4	64.1	77.2	86.5	65.9	18.4	49.3	66.3	50.0
Exports	98.3	89.5	83.2	83.3	95.7	97.3	45.5	61.1	37.3	89.6
GDP	45.1	45.2	24.9	52.6	67.1	44.6	23.4	20	31.5	24.6

Source: IMF, World Bank and national sources

- ◆ Importing countries also encounter macro-economic difficulties faced with the volatility of oil prices. This affects the internal price formation process, increases their external vulnerability and weighs on their internal demand and activity. The poorest countries suffer the most, as they are even more exposed given that they frequently subsidise petroleum product prices. Importing countries resort to economic policies involving taxes which deaden the price shocks and, in the longer term, diversification of their energy systems to reduce their dependence on hydrocarbons.

Ultimately, the consumption of oil in our economies generates a variety of risks. Firstly, physical risks of interrupted supply, then the risks from price shocks and finally the risks from the importance of the financial sphere, be they micro-economic – like those relating to investor protection – macro-economic or systemic, since the failure of an institution can have very harmful consequences for a large number of other institutions (see below, Part 3). The subprime crisis and its macro-economic consequences are a timely recollection of how bubbles can form, cause rarefaction of market liquidity, become contagious and fuel deregulation of the entire economic system: controlling oil price volatility is therefore not just about regulating oil markets, but financial markets in the wider sense.

2. On-going initiatives to improve oil market operation

Oil price volatility is not the only issue. Many initiatives have been recently launched to improve the operation of oil markets, mainly at the request of the G8 and latterly of the G20. They affect both the "physical" market and the financial derivatives market. They address a large number of concerns, from transparency to actions to reduce price volatility or prevent systemic risks.

The United States has been reflecting on these issues for some time, but the debate has now become widely international and Europe is gradually becoming involved.

2.1. Action with respect to physical markets and the producer-consumer dialogue

The major fluctuations in oil prices in 2008-2009 relaunched discussions of what actions should be taken in physical markets to reduce this volatility and help form rational expectations in medium-term prices.

Some of these actions are already ongoing, like the JODI initiative or the producer-consumer dialogue with the International Energy Forum (IEF). Others respond to the concerns of the moment, like the weekly publication of European stocks or a price range for oil⁴⁸.

2.1.1. The JODI (Joint Oil Data Initiative) has limitations these days

The search for better information on the physical fundamentals of oil markets underlies the Joint Oil Data Exercise launched in April 2001 by six international organisations (APEC, Eurostat, IEA, OLADE, OPEC and UNSD⁴⁹) to assess the lack of transparency in oil data. This collection exercise was made permanent in 2002 and renamed the Joint Oil Data Initiative (JODI). A monthly database compiling the information thus collected coherently was then created. The IEF was put in charge of coordinating JODI in 2005 and it was decided to make the database available to the public in the same year.

This database today covers more than ninety countries (representing over 90% of world supply and demand for petroleum products) and extends from January 2002 to the last month elapsed. The data cover six flows: production, demand, refinery intakes and outputs, closing stocks and stock changes. The flows, expressed in barrels, tonnes and litres, cover seven categories of product: crude oil, LPG, gasoline, kerosene, diesel, fuel oil and all petroleum products other than crude.

⁴⁸ The EITI (Extractive Industries Transparency Initiative) is also worthy of mention. This focuses on the transparency of revenues and payments of the extractive industry in countries rich in natural resources, which aims to improve their governance. This political initiative, supported by France, is not directly part of the mission's remit and has therefore not been studied in depth.

⁴⁹ *Asia Pacific Economic Cooperation, Statistical Office of the European Communities, International Energy Agency, Latin-American Energy Organisation, Organisation of Petroleum Exporting Countries and United Nations Statistics Division.*

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The group of experts appointed by the IEF after the Jeddah and London energy conferences (see below, part 2.1.2) shared the opinions of users. It concluded in its report that to increase the transparency of the physical market and help reduce the price volatility of petroleum products, countries not only had to provide the information required⁵⁰ as quickly as possible, but the IEF secretariat should be in a position to collect provisional data for comparison purposes between its own data and data collected by other public (IMF, OPEC, International Energy Agency - AIE) or private (BP Statistical Review of World Energy) bodies. It could thus supplement its database with elements dealing with subsidies to end consumers, energy intensity and energy efficiency⁵¹.

One feature of JODI is that the database only includes statistical data provided by the States and the industry - which sometimes consider them confidential - and that the IEF secretariat is prohibited from supplementing them with its own estimations, unlike the work by other international bodies. An exercise in transparency which relies essentially on the goodwill of holders of the basic information has reached its limits here.

2.1.2. The conclusions of the IEF group of experts constitutes a reference for developing consumer-producer dialogue

The International Energy Forum, created in 2000, is today a gathering of over sixty countries and thirty oil companies in the context of the dialogue between producing and consuming oil countries initiated during the Gulf War in 1991. This is an informal body (no constituent treaty) with a slimmed-down structure nowadays (permanent secretariat based in Riyadh) and a work pattern revolving around bi-annual ministerial conferences; the next one is scheduled for March 2010 in Mexico.

Two *ad hoc* conferences, the first in June 2008 in Jeddah and the second in December 2008 in London, looked into the question of the volatility of oil prices:

- ◆ In a context of the soaring price of crude, the Jeddah Summit was conspicuous for a battle of wills between producing and consuming countries. Producers underlined the role of financial speculation in the surge in prices, consumers argued there was insufficient supply.
- ◆ The London Summit, which was expected to provide an update on work areas begun in Jeddah (especially in terms of transparency and market regulation), took place just when crude prices had plummeted to \$30 the barrel. Under these conditions, the problem was no longer how to curb escalating prices but to learn from the huge fluctuations noted in 2008 and investigate how to reduce them.

A group of seven experts⁵² supervised by a steering group (High Level Steering Group – HLSG)⁵³ was assigned to this task. It was required to prepare recommendations in April 2009 for presentation to the Ministerial Conference in March 2010 with the goal of "strengthening the architecture of international dialogue, boosting the IEF and reducing volatility in the oil markets". The communiqué by the Pittsburgh G20 emphasised the importance of the work of this group of experts.

⁵⁰ In terms of stocks in particular, data lost a great deal of their usefulness if not broadcast within one month.

⁵¹ Note that the principle of extending the JODI initiative to natural gas was put forward theoretically during the 2006 Saint Petersburg Summit on global energy safety.

⁵² Claude Mandil, former Executive Director of the IEA from 2003 to 2007 is one of the seven.

⁵³ Where France is represented by the General Directorate for Energy and Climate.

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The experts submitted their conclusions and recommendations in December 2009. These were then examined by the HLSG, which only made minor alterations. The extremely detailed analysis of the operation of oil markets and changes noted in 2008-2009 is similar to the analysis developed in Part 1 of this report. It underlines the interaction between physical and financial fundamentals in determining prices, without however venturing precise reasons for the huge fluctuations seen. In a way, despite not giving a clear indication of the potential role of financial investors during this period, the experts do not for all that reject the idea of a speculative bubble.

Their recommendations pinpoint three major issues:

- ◆ Structuring the dialogue between producers and consumers through strengthening the IEF and its key objectives (ironing out the assessment differences between the stakeholders, promoting the common advantage in applying concerted, viable energy policies in the long term, defining and monitoring information dissemination projects similar to JODI), implementing a more sustained dialogue process (by increasing the number of analyses, meetings of experts of ministers and technical assistance projects), structuring and clearer governance of the IEF, strengthening the resources of its secretariat and closer cooperation with other international organisations as well as with the industry
- ◆ Improving the quality and exhaustiveness of information supplied under the JODI initiative (see above)
- ◆ Lastly, the measures attempted to reduce the volatility of oil prices, with the experts advocating before all else the transparency of market operations and price formation mechanisms and the wide dissemination of full, up-to-date information on the physical fundamentals. The experts recommend for this purpose:
 - Improved understanding of the relations between the physical oil market and the the futures market
 - Encouraging the IEF secretariat to produce and publish analyses on market fundamentals and their future changes, in conjunction with the IEA, OPEC and other research institutions. These analyses could potentially help stabilise markets given the unique positioning of the IEF.
 - Introducing regulation of oil financial markets, so that prices reflect the state of fundamentals better, mainly through greater transparency of transactions. The experts acknowledge the potential advantage of position limit mechanisms or tougher margin calls to limit price volatility, but emphasise that these mechanisms must also consider the necessary market liquidity and not trigger haphazard closing of positions of different participants when implemented.

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Despite the apparent relevance of the recommendations of experts appointed by the IEF, implementing them, especially from the institutional aspects, could be problematic and will depend very largely on diplomatic contingencies (especially relations between the United States and Saudi Arabia). It also raises the more subtle question of the positioning of the IEA, which has both credibility and historical experience in producing forward-looking research into the energy markets, especially oil. It is symptomatic in this respect that the United States has in recent years strongly encouraged the Agency to expand into the large, non-OECD consuming countries (especially China and India) and that they rely on it to launch new projects⁵⁴. The conversion of the G8 into the G20 also has the potential to legitimise the IEA as a support body for the G20 for energy. Conversely, many States still only offer the IEF moderate support⁵⁵, despite it being a unique forum for dialogue between producers and consumers.

Ultimately, new topics of concern extending beyond oil prices alone should be addressed by the IEF. These include climate change, taxation on petroleum products (taxes and subsidies), emission permit markets, the Millennium objectives, etc. They will probably be fiercely debated.

2.1.3. The publication of European stocks is an interesting idea, but difficult to turn into reality

The initiative on the weekly publication of European commercial stocks - on the ECOFIN agenda since 2005 - fulfils the objective of transparency of the physical market in Europe and aims to match existing arrangements in both the United States and Japan (monthly and weekly publications on production, imports and stocks of petroleum products). They are one of the rare sources of information available on short-term changes in oil markets.

The European Union currently only publishes its stocks on a monthly basis, with a delay of about two months. The markets therefore suffer from incomplete information and tend to base their expectations on changes in American petroleum stocks which do not reflect changes in global stocks⁵⁶. There is an objective advantage in Europe embarking on such a path in terms of market transparency and helping form petroleum product prices. France supported this position during its Presidency of the Union in July 2008, when oil prices were at their highest. Our partners were not enthusiastic about the proposal: whilst the principle of publishing commercial stocks every week was included in the first draft revisions of the strategic stocks directive in December 2008, the text finally adopted on 12 June 2009 no longer refers to a monthly publication by the 27, simply confirms the current arrangements⁵⁷.

There are three reasons for the reticence of other European States:

- ◆ The lack of enthusiasm by industry to supply information which they deem proprietary even though the major operators all use cargo and stock monitoring systems for their own trading operations
- ◆ The cost of setting up such a system, in addition to the existing arrangement

⁵⁴ See especially the letter dated 19 October 2009 from President Obama to the Executive Director of the IEA on the follow-up work to the Pittsburgh Summit on grants for petroleum products.

⁵⁵ To date, only forty of the ninety States involved in the work of the IEF and the JODI initiative are up-to-date with the financial contributions to the operation of the secretariat.

⁵⁶ Many service companies offset this lack of information by providing the large operators - at a cost - with an estimation of these data (some based on observing tanker movements or tanks in and around Rotterdam).

⁵⁷ The only new feature in the monthly publication of statistics aggregated by the Commission. This arrangement theoretically authorises the European authorities to collect data directly from industrialists (two-tier system).

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- ◆ The limited impact of such a publication on the volatility of oil prices, with some Member States believing that data published too frequently would increase it, even if only temporarily.

In addition, the French position is weakened by the fact that detailed production and refinery stock data have only been disseminated after six months since June 2007, for reasons of competition rights, which partially restricts the dissemination of aggregated data.

The Commission has supported the French position up until now and commissioned a feasibility and impact study on the question. A provisional report was submitted in December 2009. This report highlights:

- ◆ The virtual impossibility of setting up in all 27 countries a system as complete as the American version, which has the advantage of being run in and very reliable
- ◆ An estimated incremental cost of a weekly publication of about €6 M/year
- ◆ Not unexpectedly, an unproven effect of publishing weekly statistics on reducing the volatility of oil prices, based on a correlation study with the American data
- ◆ The confirmed reticence of industrialists and national authorities in Member countries, despite the advantage seen by traders and market analysts

It seems highly unlikely, under these conditions, that such a measure will see the light of day in the short term, unless included in a coherent oil policy at community level (see below, part 3.4).

2.1.4. The idea of an oil "price range" in the medium term combined with a regulation mechanism is unwieldy and does not provoke consensus

The idea of an oil price range in the medium term is not new: remember the OPEC mechanism introduced in March 2000 and abandoned officially in February 2005, although it only operated until early 2004 (see part 1.1.1). The speech by the President of France in Abu Dhabi (26 May 2009), his statements on the fringes of the Franco-British Summit in Evian (6 July 2009) and his joint comment with the British Prime Minister published in the Wall Street Journal (8 July 2009)⁵⁸, which called for consensus between producing and consuming countries on determining an oil price range coherent with the fundamentals, have put the ball back into court.

Any efficient price regulation mechanism for crude⁵⁹ effectively assumes that it is possible to:

- ◆ Assess a fundamental price from a model including exhaustive elements of supply and demand in the medium term, which nowadays seems very difficult given the lack of consensus on these elements and of available information
- ◆ Keep the range within reasonable limits to avoid it losing direction, one that allows economic adjustments and can be reviewed regularly
- ◆ Plan for a regulating mechanism based on physical stocks (strategic⁶⁰ or commercial) or additional spare capacities, which raises the question of how to finance them

⁵⁸ Wall Street Journal, "We Must Address Oil-Market Volatility".

⁵⁹ We are leaving aside the fact that the interest of consuming countries is not so much in crude oil but in the resulting refined products, where prices (excluding VAT) can deviate significantly from the WTI and Brent benchmarks.

⁶⁰ As was the case selectively in the United States between September 2000 and November 2001 (see on this point the study by R. Bamberger, *Strategic Petroleum Reserve*, Congressional Research Service, October 2002).

The Working Group did not reflect specifically on the question raised regularly on using strategic OECD stocks to "stabilise" oil prices or reduce volatility for three basic reasons:

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Three studies have looked into this issue:

- ◆ The ENI study in May 2009⁶¹, which provided for gradual implementation of a price range and a regulating mechanism under the auspices of a world energy agency financed by producers and consumers, its members. ENI made no attempt to hide the tremendous difficulties of such a reform whilst emphasising its long-term advantages
- ◆ The Deloitte study commissioned by the British authorities in November 2009⁶², which examined the conditions for developing consensus on an oil price "variation band"; it nevertheless excluded recourse to regulating mechanisms
- ◆ The study produced by the group of experts appointed by the IEF.

The conclusions of this study are the result of consensus acquired with difficulty between the experts which was not queried by the HLSG. The following points stand out:

- ◆ It is highly unlikely that the mechanisms announcing a price range for oil or setting up a stabilisation fund to maintain prices within this range can function in current oil market conditions
- ◆ The current meeting of minds on prices by producers and consumers in a band of \$60 to \$80 a barrel⁶³
- ◆ The potential role of the IEF as a dialogue institution to promote this joint effort of views, as a forum for expressing this convergence and disseminating key information on the forward-looking fundamentals of the market used to make this stabilisation easier
- ◆ Increased coordination and dialogue on possible reactions from producers (investment policy) and consumers (demand measures, substitution policy, energy efficiency) to changes in price signals, to help stabilise them
- ◆ More guarded positions taken by stakeholders on changes in oil prices which do not exacerbate the volatility of markets; the IEF secretariat could act as an informal communication channel.

The experts are also prudent with their conclusions for two major reasons:

- ◆ The United States, the world's largest consumer of oil, is opposed to any idea of price range or organised regulating mechanism
- ◆ Even OPEC is not enthusiastic; since 2004 it has constantly supplied the market (including compensating for non-OPEC countries) to satisfy physical demand and without seeking to influence the prices despite being ready (as it showed at the end of 2008) to reduce its production to counteract too great a fall.

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- The huge difficulty in bringing forth a shared vision on using these reserves for purposes other than protecting against supply shortages
 - The mechanisms for constituting and managing these stocks, which differ considerably from one country to the next, from direct physical holding by the State to mandatory storage obligations for industry
 - The potential doubts over the effect of such interventions, given the lack of proportion between the "physical" and "paper" oil markets

Nevertheless, the high demand of investors for exposure to oil - which partly explains recent events - may revive the thinking on how these stocks are financed.

⁶¹ ENI, "A Blue Print for Oil Stabilization", 25 May 2009.

⁶² Deloitte, report for the Department of Energy and Climate Change (DECC), "Reducing oil price volatility, developing a framework for determining an oil reference price", November 2009.

⁶³ On the producer side, Russian President Medvedev declared that a workable price would be between 70 and 80 dollars at the G8 meeting in Aquila in July 2009. In April 2009, the Venezuelan Minister for Energy saw a need for a price supervision system which would ensure safety and stability for producers and consumers. In December 2008, the King of Saudi Arabia had himself considered \$75 a barrel a fair price. The Kingdom's Minister for Energy, Ali Naimi, justified this price as the one required by marginal producers to maintain investment sufficiently high to meet future needs. On the consumer side, the ENI study considered a range of \$60 to \$70 a barrel.

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It would seem therefore that in this respect, the conclusions of the group of experts appointed by the IEF are the largest common denominator to be expected on this question.

2.2. Action in the financial markets for oil and commodities

As part of the reform of institutions and financial institutions worldwide, proposals to improve the operation of financial commodity markets, especially oil, are the most advanced in the United States. On-going work by IOSCO is focusing more on the questions of transparency, whereas Europe is just starting out on its thinking process, despite an ambitious work programme.

2.2.1. The planned changes form part of the discussions on financial derivatives markets

Current international discussions on improvements to be made to the operation of financial markets in oil fall under the more general context of the reform of financial derivative markets, with the main objective of preventing systemic risks. The "paper" oil market does, however, have specific features, mainly due to the game of interactions with the physical market and to the presence of a wide range of participants (like for all commodity markets, in fact) which can justify *ad hoc* treatment.

The major guidelines for forthcoming reforms were defined under successive G8 and G20 and were reiterated during the Pittsburgh Summit, the road map for current work:

- ◆ Improving the over-the-counter derivatives markets: *All standardized OTC derivative contracts should be traded on exchanges or electronic trading platforms, where appropriate, and cleared through central counterparties by end-2012 at the latest. OTC derivative contracts should be reported to trade repositories. Non-centrally cleared contracts should be subject to higher capital requirements. We ask the FSB and its relevant members to assess regularly implementation and whether it is sufficient to improve transparency in the derivatives markets, mitigate systemic risk and protect against market abuse".*
- ◆ Oil financial derivatives more specifically: *"We undertake jointly and individually [...] to improve regulatory oversight of energy markets by implementing the International Organization of Securities Commissions (IOSCO) recommendations on commodity futures markets and calling on relevant regulators to collect data on large concentrations of trader positions on oil in our national commodities futures markets. We ask our relevant regulators to report back at our next meeting on progress towards implementation. We will direct relevant regulators to also collect related data on over-the-counter oil markets and to take steps to combat market manipulation leading to excessive price volatility. We call for further refinement and improvement of commodity market information, including through the publication of more detailed and disaggregated data, coordinated as far as possible internationally. We ask IOSCO to help national governments design and implement these policies, conduct further analysis including with regard with to excessive volatility, make specific recommendations, and to report regularly on our progress".*

The official statements therefore combine concerns over transparency, risk prevention and combating market abuse or manipulation. In terms of oil, they call for market conditions capable of combating "excessive volatility". Progress in applying these guidelines varies widely from country to country.

2.2.2. The planned reforms in the United States will set the general direction for future regulations on a global scale

2.2.2.1. It is difficult today to see where some draft texts are leading

Given their past history in the commodity futures markets, the existence of a specific regulator for this sector in the United States - the CFTC - and consumer sensitivity to petroleum product prices⁶⁴, the American authorities were concerned by the reasons for the high volatility of oil prices and how to remedy them. The numerous hearings organised by Congress on this topic and the academic studies mentioned above testify to this.

Until 2008, the CFTC thought that the oil market should be left to manage itself under the December 2000 framework deregulated substantially by the CFMA. Under the Bush administration, the CFTC produced a certain number of reports demonstrating firstly the lack of manipulation in energy markets and secondly, the lack of link between financial positions and formation of the petroleum price⁶⁵. The July 2008 crisis forced a political review of this position.

With the appointment of Gary Gensler at the head of the CFTC, the new American administration has shown its desire for a more interventionist regulatory policy.

In this framework, the CFTC has transformed the information system in the futures markets and speeded up the introduction of cooperation on market monitoring with the London market started by the information exchange agreement signed in 2006, but which only covered the risks of market abuse or price manipulation. As stated above (see part 1.1.3), it has been publishing disaggregated statistics since September 2009 on the open positions of participants in the NYMEX and monitors OTC transactions in derivative instruments relating to the American market.

Lastly, the CFTC, SEC (Securities and Exchange Commission) and American Treasury have combined forces to implement new legislation for improved monitoring of derivative product markets. The financial market reform sought by the Obama administration incorporates elements to improve market transparency and could render the price signal for oil more significant.

The House of Representatives examined many draft texts on miscellaneous aspects of the reform of the American financial regulation⁶⁶ before finally adopting the Wall Street Reform and Consumer Act (HR 4173) on 11 December 2009. Title III basically repeats the current legislation under the Commodities Act and the Securities Act, incorporating into them the regulation of derivatives markets in the over-the-counter markets.

Its main characteristics are the following:

- ◆ In terms of institutions, the SEC deals with operations in derivatives with an underlying financial asset (credit default swaps, share derivatives). The CFTC is responsible for commodity, exchange rate and interest rate derivatives,⁶⁷ and
- ◆ Transactions of sufficient volume are designated to be standardised and negotiated in post-market by a central counterparty clearing house (CCP).
- ◆ Three categories of participants are defined:
 - Swap dealers who are obliged to trade via CCP

⁶⁴ Mainly given the - relatively - low taxation of these products for consumers, which immediately generates signals of strong prices when in crude price variations.

⁶⁵ Including the study by Büyüksahin & alii quoted earlier (see part 1.1.3).

⁶⁶ Six different bills were adopted by the House Financial Services Committee at the end of December 2009.

⁶⁷ Exchange swaps may ultimately be excluded from the new regulations.

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- Non-dealers who are more or less producers or end users of petroleum products and who are in fact exempt⁶⁸, except when they fall under the following category
- The major swap participants who would hold "substantial" open positions (excluding hedging operations) and "who would create a significant counterparty risk with potential damaging effects on the stability of the banking system or American financial markets" and who could therefore be forced into trading via the CCP
- ◆ Once trading via a central counterparty is required, it will also be mandatory to trade in a swap execution facility (SEF) or regulated market (unless no-one agrees to negotiate the corresponding contract). The non-SEF transactions will be subject to more extensive reporting obligations
- ◆ Post-market recording in trade repositories of non-CCP transactions would also be mandatory (therefore today the basics of over-the-counter negotiations); the CFTC would have to make the corresponding aggregated statistics public
- ◆ Swap dealers and major swap participants must register with the SEC or the CFTC or both according to their trading markets. The regulator will have the authority to set the level of corresponding margin calls. They would also be subject to tougher capital and margin call restrictions for non-CCP swaps⁶⁹
- ◆ To limit the risks of concentration or the systemic risks, a market trader would be restricted to 20% capital holding in an exchange, an SEF or a CCP
- ◆ The CFTC would be allocated new powers for fixing position limits for market participants, extended to OTC operations (see below, part 2.2.2)
- ◆ Lastly, the CFTC and the SEC are required to coordinate with the regulators of foreign markets on exchanging relevant information for applying American legislation and establishing coherent global rules to minimise regulatory arbitrage possibilities. The bill also gives American regulators the option of banning any swap transaction on American territory by an entity whose country of origin enforces regulations with a potential systemic risk for the American financial market.

This very comprehensive legislation is the fruit of compromises resulting from intense lobbying by sector professionals. It is effectively backing down from the initial intentions of the American administration. Several points deserve special mention at this stage:

- ◆ The non-dealers are very widely exempt from restrictions of the new regulations. Similarly, the definition of major swap participant leaves the regulator wide freedom of choice
- ◆ The American bill establishes a direct link between recording a CCP transaction and executing it on an exchange platform, showing how much importance the authorities attach to transparency of market operations⁷⁰, whereas in Europe, the emphasis seems more on preventing systemic risks through centralised clearing (see below, part 2.2.4)
- ◆ Concerns over competition with other financial marketplaces are taken into account, as is the possibility for regulators to apply extra-territorial measures when foreign regulations are not "up to scratch" or put the American financial system at risk

⁶⁸ As a result of the Peterson-Franck amendment to the text voted in the House of Representatives, the commercial and industrial end users, ranging from airlines to refineries and gas producers, are exempt from the obligation to use markets with a clearing house and from providing cash collateral in counterparty for their hedging operations. They are not seen to pose a major risk to the financial system.

⁶⁹ An amendment extending these tougher restrictions to non-dealers, presented by the Chairman of the HFS Committee, was rejected due to potential additional costs for the end users.

⁷⁰ See on this point, among others, the Gary Gensler hearing before the Senate Agriculture, Nutrition and Forestry Committee on 17 November 2009 and his public pronouncements of 12, 27 and 29 January 2010.

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- ◆ The discussions held by the mission in Congress have suggested that this bill could be altered radically when it goes before the Senate, especially the definition of major swap participants or the technical - but financially tough - question of the level and segregation of initial contract margins. Similarly, the question of adopting a single law (covering all financial sector reforms) or two separate texts, one of which would cover derivative markets along, is still not clear-cut
- ◆ In his most recent statements⁷¹, the CFTC Chairman has criticised certain aspects of the current bill strongly (exemption conditions for the benefit of non-dealers, dispensations to the mandatory move to SEF) as he considers that they maintain the opacity of the over-the-counter market. Gary Gensler is clearly in the vanguard of the new financial regulation policy championed by the American administration
- ◆ Lastly, the recent announcements by the American Presidency on the regulation of the banking sector are likely to have an impact on the timetable for the bill as a whole, even if the overall architecture of its Title III is not overturned.

2.2.2.2. *The debate over position limits*

The regulator has been enforcing open position limits for participants in American commodity markets for many years. This was authorised by the Commodity Exchange Act of 1936⁷² which is still in force. As stated above (see part 1.1.3), the CFTC, which had initially established federal position limits in the agricultural markets, effectively entrusted the markets themselves (CME and NYMEX) with making their own rules. There followed gradual distinction between the absolute limits not to be exceeded by a participant and the position accountability levels justifying intervention by the regulated market or the CFTC itself. The CFMA of December 2000 opened the way to all markets to set position accountability levels without prior consent from the CFTC. In addition, hedging in regulated markets of positions taken by swap dealers in the OTC markets were exempted from position limits or accountability levels through a wider interpretation of the *bona fide* hedge rule included in section 4a of the Commodity Exchange Act (CEA).

Thus, for the financial oil derivatives traded on the NYMEX, the only position accountability levels until now covered mainly the futures contracts with the shortest delivery terms, with far higher threshold levels for all forward months taken together.

The dynamics created by the new American administration and the appointment of Gary Gensler as the head of the CFTC have brought significant changes in the approach to the subject, with a threefold effect:

- ◆ The start of discussions in March 2009 on a proposal to restrict swap dealers from benefiting from exemption under the *bona fide hedge* and to define new position limits with a view of better managing risks
- ◆ Bill HR 4173 referred to above to extend the powers of the CFTC to fixing position limits for certain swap operations which compete with or can affect significantly the price deficit process by aggregating the positions in both regulated and over-the-counter markets

⁷¹ Especially the one on 29 January mentioned earlier.

⁷² See section 4a of the CEA: "*Excessive speculation in any commodity under contracts of sale of such commodity for future delivery made on or subject to the rules of contract markets causing sudden or unreasonable fluctuations or unwarranted changes in the price of such commodity, is an undue and unnecessary burden on interstate commerce in such commodity. For the purpose of diminishing, eliminating, or preventing such burden, the commission shall, from time to time, after due notice and opportunity for hearing, by order, proclaim and fix such limits on the amount of trading under contracts of sale of such commodity for future delivery on or subject to the rules of any contract market which may be done by any person as the commission finds is necessary to diminish, eliminate, or prevent such burden*".

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- ◆ Lastly, the announcement of 14 January 2010 of consultations prior to the implementation, within three months, of absolute position limits in the NYMEX energy contracts, non-existent until now, accompanied by new rules on *bona fide* hedge exemptions

These points show real progress by the American authorities in acquiring instruments to face up to seemingly excessive speculation that are totally in line with the historical 1936 system. This does not necessarily mean that the CFTC, which will always have tremendous exemption powers and room for manoeuvre in setting limits, will apply them indiscriminately.

Effectively, the new federal limits for the NYMEX futures contracts, if applied in 2008-2009, would only have affected 23 market participants, of which sixteen would have benefited from exemptions. The CFTC estimates that about a dozen participants will be restricted in the future by these new rules⁷³. This could suggest therefore that these new rules will hardly change the complexion of the market⁷⁴. Some participants certainly believe this.

The positions expressed by certain CFTC commissioners reflect concerns also felt in this respect by members of Congress: the new rules do not provide a clear answer to the treatment to be reserved for the index funds and do not, at this stage, consider all the OTC market positions; conversely, they could arouse fears of activities being delocalised into less-regulated markets.

2.2.3. Work by the IOSCO Task Force is basically focusing on transparency

At the request of the G8 Finance Ministers at the Osaka Summit in June 2008, the IOSCO set up a task force on the financial commodity markets, chaired jointly by the CFTC and the FSA. This task force has examined questions dealing with volatility and the role of new entrants in these markets, transparency and monitoring, the issues of regulations and strengthening of international cooperation. Whilst underlining that numerous studies had suggested strongly that economic fundamentals had caused the major fluctuations in commodity prices rather than speculative activities, its report submitted in March 2009 advises careful monitoring of future market changes and puts forward the following recommendations:

- ◆ The market authorities should have access to data used to identify concentrations of positions and the overall composition of the market
- ◆ The market monitoring programmes should be upgraded
- ◆ The market authorities should exchange relevant data with each other and, if appropriate, with the authorities responsible for underlying markets

As stated above (see part 2.2.1), the Pittsburgh Summit urged the IOSCO to continue with its analyses and to formulate more precise recommendations, in particular on the transparency of commodity markets and also taking into account the guidelines for the financial derivative markets in general. The IOSCO task force therefore went back to work in December 2009 with the following work programme:

- ◆ Produce a report on implementing the conclusions of the March 2009 report
- ◆ In terms of transparency in over-the-counter markets, widen conditions for developing a trade repository, primarily for petroleum product contracts and developing policies with the relevant financial institutions

⁷³ The most significant in the oil sector being in all likelihood Goldman Sachs and the United States Oil Fund (USO).

⁷⁴ See especially the article by R. Kakadia and Clay Seigle "Proposed new US energy trading limits: status quo continues", IHS CERA, 15 January 2010.

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- ◆ Whilst waiting for this trade repository to be created, examine the possibilities of standardising requests for information from financial go-betweens on OTC operations, based on the CFTC special call model, and obtain disaggregated statistics on OTC commodity transactions, especially oil⁷⁵, from the Bank for International Settlements (BIS)
- ◆ In terms of obligations of declaring and disseminating the most significant positions of participants in the regulated markets, examine implementing a system similar to the CFTC system (Commitment of Traders Report) in the main financial marketplaces, based on harmonised methods and categories
- ◆ Lastly, the task force will examine in greater detail whether it is appropriate to regulate publishers of information of physical transactions (Platts, Argus), and with what objective, where it is not clear how representative the scope of their coverage is

Putting aside the legitimate questions of the task force on the formation mechanisms in the spot and forward markets, its work programme has not changed radically. What is more interesting are the elements that are lacking or underlying the debate, especially:

- ◆ In terms of regulation, the question of position limits in the oil derivative markets, even though the United States is making its rules stricter in this area. Unlike the CFTC, the FSA is not susceptible to price issues and considers that its role is to make sure that the market it regulates (here, the ICE) operates in a fair and orderly fashion. The FSA is not so much interested in participant motivation - which explains why it has so far has placed little reliance on the CFTC distinguishing between the various market participants - but how their behaviour is compatible with the market rules. Like the CFTC, the FSA encourages the ICE to set accountability limits to prevent market abuse, but its mandate prohibits it from intervening through fixed position limits which would affect the prices.
- ◆ The question of a single trade repository for oil derivatives and its location, where the industrial and governance issues and information access for different regulators are vital.

2.2.4. European Commission discussions on the topic are only just beginning, but its work programme is ambitious

The European Union revamped its framework for supervising financial activities during 2009, mainly to prevent the onset of systemic crises and encourage improved monitoring of institutions and financial markets. The Larosière report submitted in February 2009 heralded the creation of a European System of Financial Supervisors (ESFS) featuring three new European regulatory bodies, including the ESMA (European Securities and Markets Authority). The European Council approved both the major guidelines for this reform and the texts for their implementation during its meetings of 18 and 19 June 2009 and 2 December 2009. Lastly, the European Parliament will examine these texts during the first half of this year, which should mean that ESMA becomes operational on 1 January 2011.

Work in Europe to improve the operation and monitoring of financial derivative markets has advanced less rapidly, however. The Commission has focused on observing developments elsewhere (work by the FSB and the IOSCO, draft American reforms) before tabling its own proposals.

Two communications by the Commission published last October have nevertheless opened the debate on this subject:

⁷⁵ The quality of data obtained for this purpose can give rise to scepticism given that the BIS statistics are provided by banks on a voluntary basis. In addition, categorisation of OTC transactions by the BIS is still imprecise and the data compiled not necessarily homogeneous.

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- ◆ The communication on courses of action to acquire robust, safe and efficient financial derivative markets⁷⁶; this was itself the result of a first consultation launched in Spring 2009
- ◆ The communication on the agricultural product derivative markets⁷⁷, which itself follows on from a first communication in December 2008 on European food prices

Although the second document only touches on the energy derivative markets, the Commission sees the first as a basis for proposing a general framework on derivative markets as a whole which would effectively apply to the oil market and which is consistent with the G20 guidelines:

- ◆ Dealing with the counterparty risk by creating clearing houses subject to common Europe-wide regulations which will negotiate standardised contracts; reinforcing the collateralisation requirements for bilaterally-cleared contracts; differentiated treatment of capital charges for CCP or non-CCP contracts, as much to prevent the systemic risks as to encourage centralised clearing
- ◆ Reducing the operational risk by wider contract standardisation, particularly in legal terms
- ◆ Increasing the transparency of derivative markets by establishing trade repositories for the non-CCP contracts, executing standardised and CCP transactions in organised markets and reinforcing pre-market and post-market obligations
- ◆ Under market integrity and monitoring, taking into account problems specific to the financial derivative markets during reviews of the markets in financial instruments directive (MiFID) and the market abuse directive (MAD), scheduled for 2010
- ◆ Lastly, implementing common legislation on position limits⁷⁸.

The initial reactions to this communication reveal the issues raised:

- ◆ The report by the FSA and the British Treasury⁷⁹, despite agreeing overall with the Commission's communication, steps back from questions about regulating and controlling CCP and trade repositories, margin calls applicable for CCP and non-CCP transactions and lastly imposing position limits, in line with its traditional approach (see above, part 2.2.3)
- ◆ The International Swaps and Derivatives Association (ISDA), with a membership drawn from the main participants in over-the-counter financial markets, is currently lobbying actively to restrict the implications of the new regulations for the activities of its members⁸⁰
- ◆ The European Association of Corporate Treasurers (EACT) is extremely nervous about the costs of converting today's bilaterally-traded over-the-counter transactions into CCP and the implications for the liquidity of non-financial businesses⁸¹.

These comments are not in themselves surprising: they reflect the same concerns as apparent in the United States under the debate in Congress on bill HR 4173 (see above, part 2.2.2).

Although the Commission has only just started its discussions, it has set itself an ambitious work programme for 2010, as it involves:

⁷⁶ COM(2009) 563/4 *Ensuring efficient, safe and sound derivatives markets: Future policy actions*, 20 October 2009.

⁷⁷ SEC(2009) 1447 *Agricultural commodity derivative markets: the way ahead*, 28 October 2009.

⁷⁸ The reasons given by the Commission in its communication for this measure are most enlightening: *"The Commission intends to propose rules to give regulators the possibility to set position limits to counter disproportionate price movements or concentrations of speculative positions"*.

⁷⁹ *Reforming OTC Derivative Markets, a UK perspective*, December 2009.

⁸⁰ The Commission as well as European and national parliaments.

⁸¹ Open letter from EACT to the European Union Commissioners, 6 January 2010.

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- ◆ Implementing *ad hoc* legislation on the CCP and trade repositories (post-market directive)
- ◆ Revising the directive on capital requirements for banks (CRD) to introduce differentiated capital charges for the CCP and non-CCP derivatives, increase the margin calls for these products and take better account of operational risks in transactions
- ◆ Introducing new obligations of transparency for pre- and post-market transactions in derivatives under the review of the MiFID and altering the exemptions currently applicable to commodity derivatives and the institutions negotiating them
- ◆ Extending the MAD directive to transactions in the OTC market and introducing position limits.

*

Numerous initiatives or thought-provoking discussions have been launched to improve the operation of oil markets. They affect both the "physical" market and the financial derivatives market. They address a large number of concerns, from transparency to actions to reduce price volatility or prevent systemic risks. They go far beyond the question of oil alone.

The group of experts from the International Energy Forum has thought long and hard about the operation of markets. They have reached a conclusion very similar to the one expressed in Part 1 of this report. Despite the apparent relevance of the recommendations of experts, implementing them, especially from the institutional aspects, could encounter a few problems and will depend largely on diplomatic contingencies. Several bodies have examined the question of establishing a range which incorporates the oil price variations, but this seems unrealistic for the time being, especially given that OPEC and the United States are strongly against the idea.

The major guidelines for financial market reforms have been defined by successive G8 and G20 and were reiterated during the Pittsburgh Summit. The United States has been reflecting on reform objectives and methods for some time, but the debate is far from closed. With the appointment of Gary Gensler at the head of the CFTC, the new American administration has shown its desire for a more "can-do" regulation policy. Discussions are under way in the Senate on a bill covering the regulation of financial derivative markets, but, in February 2010, the type of legislation which will be voted in is not yet known, nor what impact the statements by President Obama on 21 January relating to the financial system will have on this point.

In Europe, the European Commission has embarked on discussions on these subjects, publishing its road map in October 2009. It falls under the guidelines given by the G20.

Internationally, beyond implementing the G20 guidelines, the debate throws up divergences in the design and implementation of regulatory reforms of commodity derivative markets, where there are concerns over competition between financial marketplaces.

The major issue today is global, harmonised regulation of derivative product markets and, more widely, financial markets. The road will be long and hard and it is doubtful whether it can significantly limit risks of volatility, especially for oil by itself. In any case, the macro-economic and systemic risks will still be there.

3. What proposals for France?

In a world market such as that for oil – whether it is "physical" oil or "paper" oil – efforts to encourage and improve consensus concerning understanding of and changes in the physical fundamentals that help balance supply and demand, or to consolidate the market's function of forming short- or long-term prices can only be done on an international scale.

France cannot act alone in an area where the responsibilities are largely shared and the success of any measures proposed relies first and foremost on common vision, desire and implementation.

As we have seen above, there are a great many initiatives on the subject, and the "desirable" and the "possible" have already been explored.

The Working Group has therefore focused its recommendations on four areas, consistent with the observations it has been able to make, by associating existing initiatives and other, more innovative proposals that France could make internationally, either to the G20 or the European Union:

- ◆ Support the initiatives of the International Energy Forum and moving towards greater transparency in oil markets
- ◆ Apply the guidelines set by the G20 on derivative market regulation to the financial markets in oil
- ◆ Implement specific, innovative rules for the oil markets
- ◆ Propose a genuine "oil strategy" for the European Union

These four major areas are broken down into 22 operational proposals detailed below.

3.1. Support the initiatives of the International Energy Forum and press for greater transparency in oil markets

3.1.1. Boost the role and credibility of the International Energy Forum

The IEF is currently the only G20-sanctioned forum where energy producing and consuming countries can engage in dialogue in greater depth, and in which consensus building is encouraged. As we have seen above (see part 2.1.1), this dialogue is not problem-free, as shown for example by the conclusion of the group of experts on the question of the oil price fluctuation band. The Forum and its secretariat nevertheless have a fundamental role to play in accelerating the JODI initiative. This is now the essential, "shared" instrument⁸² for improving transparency on the physical fundamentals of oil markets.

In addition, within the framework of improved regulation of the world economy sought by the international community, the Forum may be called on to consider the oil and energy issues in a far wider context: relations between the price of oil, the exchange rate and inflation, organisation of energy-related financial flows, relations between oil, energy and economic development.

⁸² Compared with, say, the IEA, which remains very geared to the OECD countries, despite its attempts to establish links with certain large non-OECD consumer countries (China, India) and OPEC.

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High-level talks by the group of experts have resulted in a set of coherent proposals covering both the objectives and the governance of the Forum or its information instruments. Apart from a hypothetical world energy agency with the means to intervene directly in the markets (according to the scheme set out in the ENI proposals), it is difficult to envisage another body where "consensus" could be achieved on an appropriate price band for oil which would better anchor long-term expectations.

The rationale behind proposals put forward today is to seek greater transparency of physical market fundamentals and to use the IEF and its secretariat as a vehicle for disseminating "neutral" information. This assumes that the Forum is credible in this role:

- ◆ Politically, in relation to the IEA and OPEC and supported by the industry, in an attempt to override potential diplomatic objections
- ◆ Technically, by increasing the IEF secretariat's ability to carry out its data collection and information sharing tasks. There is sufficient scope here theoretically not to have to raise the question of hypothetically redundant remit compared with other international bodies.

France was one of the founders of the IEF and has supported its development, especially when the JODI initiative was launched. The Working Group believes that it has a major role to play in this area, in conjunction with the European Commission, which closely monitors the work of the IEF and maintains constructive dialogue with OPEC (including joint studies) and our main Union partners⁸³.

Proposal 1: Actively support the initiatives proposed under the work of the group of experts appointed by the IEF, aiming at increasing the legitimacy of the Forum in running the producer-consumer dialogue and reinforcing the dissemination of neutral, transparent information on the fundamentals of the oil market.

Proposal 2: Persuade our European partners and the Commission to contribute more widely to the IEF action.

3.1.2. Widen actions to promote greater transparency in all oil markets

The question of transparency is at the heart of the debate on market regulation. The level of transparency of a market defines the information accessible to the participants during the negotiation process. Changes made to this level of transparency therefore affect the optimum behaviour of market participants and influence the price formation process.

It can be argued that the lack of transparency means that market participants can tolerate high volatility and low liquidity better, with some of them even able to go against the general trend when prices vary and provide additional liquidity to help stabilise the markets. Excessive transparency may even discourage the supply of liquidity by the operators due to their increased exposure to risks once transactions are known to their competitors.

However, the negotiation process should preferably be transparent as it reduces information asymmetries. These asymmetries bring operators face to face with the problems of adverse selection and moral hazard⁸⁴. Greater transparency gives different operators fairer access to the most recent and most accurate information, increases their price comparison ability and focuses on transactions in a more realistic manner.

⁸³ In this respect, one positive outcome we may expect from the Franco-British dialogue on oil price volatility is joint support by both our countries for the experts' proposals. The caution shown by the United Kingdom is important, however, as the Deloitte study commissioned by the Ministry of Energy and Climate Change never once mentions the IEF, referring solely to an oil markets forum.

⁸⁴ See Mishkin, Frederic S., "Financial Instability and the Federal Reserve as a Liquidity Provider", address to the American Museum of Finance commemorating the panic of 1907, New York, 26 October 2009.

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Transparency also improves the price deficit process through faster dissemination and integration of price signals. It increases liquidity by providing all market participants with comparable information on market conditions and by reducing the cost of transactions.

In the special case of oil markets, transparency can be grasped from a number of angles (see table below):

- ◆ By differentiating between transparency relating to the physical oil market and to the financial market and the most relevant data for use in addressing it: it can therefore be argued that it is more important nowadays during the price formation process to have available statistics on Chinese stocks or on investment funds in the regulated and OTC futures markets than weekly changes in European stocks or in total open positions on the NYMEX or ICE
- ◆ By assessing the instruments (both in terms of suitability and of quality) used to achieve this transparency, as mentioned previously
- ◆ By questioning the goals of revealing information and asking who the beneficiaries are – the market (under the price formation and physical or financial investment decision process), the competition authority or the financial regulator, in order to deal with risks, whether micro-economic (abuse of dominant position, price manipulation), macro-economic or systemic⁸⁵. The required level of transparency is not the same in all three cases.

It may also be wise to reflect on the links between transparency and volatility and on the stabilising influence – or lack thereof – of information revealed in the price formation process. The response to this question is far from trivial and the problem closely resembles the one faced by the financial regulator when he defines the obligations of transparency governing companies applying for public issue:

- ◆ Statements on oil prices by a Minister for Energy in a major producing country or an investment bank with major own-account trading activities help form prices but do not necessarily stabilise them, hence the importance attached to "coordinated" communication on these subjects in the proposals from the experts appointed by the IEF
- ◆ Conversely, if this or that major consuming country does not make public the measures it intends to implement to react at its level (restricted supply, developing alternative energies) to variations in prices of crude or refined products, this can sustain volatility, even though such communication would be advisable to shed light on the fundamentals in the long term

The proposals that are put forward below by the Working Group must be assessed in this context.

⁸⁵ See below, part 3.2.1, for the precise definition of these risks, as well as Appendix V.

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Table 6: A schematic approach to oil market transparency

	Data	Market segments	Instruments	Concerned entities and objectives
Physical fundamentals	<p>Stocks (United States, Europe, emerging countries)</p> <p>Consumption (advanced countries, emerging countries)</p> <p>Production capacities (OPEC, non-OPEC)</p>		<p><i>Joint Oil Data Initiative (JODI)</i></p> <p>Sector publications (IEA, OPEC, Energy Information Administration, etc.)</p> <p>Consumer/producer dialogue</p> <p>Publication of stocks (monthly, weekly, strategic and commercial)</p>	<p>Governments and central banks:</p> <ul style="list-style-type: none"> ▪ Macro-economic forecasts ▪ Definition of the economic policy <p>Market:</p> <ul style="list-style-type: none"> ▪ Formation of expectations and prices ▪ Decisions on physical investment
Physical markets	<p>Volumes in transit</p> <p>Price references (spot, forward)</p> <p>Short-term projected changes (supply, storage, demand)</p>	<p>OTC transactions and annual contracts in:</p> <ul style="list-style-type: none"> ▪ Crude oil ▪ Refined products 	<p><i>Platt's and Argus</i> quotations</p>	<p>Competition authority:</p> <ul style="list-style-type: none"> ▪ Combating abuses of dominant position and price manipulations ▪ Preventing obstacles to competition <p>Financial regulator: theoretically not competent</p>

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	Data	Market segments	Instruments	Concerned entities and objectives
Financial fundamentals	Growth of the financial sphere Growing numbers of markets, instruments and participants Macro-economic prospects			Governments and central banks: <ul style="list-style-type: none"> ▪ Macro-economic forecasts ▪ Definition of economic policy
Financial markets	Volumes by participant/medium/investment horizon Positions by participant/medium/investment horizon Price references (futures, options, swaps) Other determining factors (\$/€ exchange rate, interest rates, market liquidity, etc.)	Regulated markets: NYMEX, ICE Multilateral trade facilities (MTF) "Pure" OTC markets	Pre-trade transparency: <ul style="list-style-type: none"> ▪ Order books in regulated markets and MTF Post-trade transparency: <ul style="list-style-type: none"> ▪ CCP, trade repositories ▪ Publications on positions by participants like CoT report and CIT report ▪ Aggregated sources (central banks, BIS, etc.) 	Market: <ul style="list-style-type: none"> ▪ Formation of expectations and prices ▪ Decisions on financial investment Financial regulator: <ul style="list-style-type: none"> ▪ Combating abuses of dominant position and price manipulations ▪ Protecting investors ▪ Preventing macro-economic and systemic risks Competition authority: not competent

Source: Mission

3.2. Fully apply the global guidelines set by the G20 for the financial commodities markets, especially for oil

3.2.1. The problem of financialised commodities markets

Any regulation of commodity markets assumes that their hoped-for tasks and functions are defined in advance. Under globally-oriented markets, like oil, this also assumes a view shared by national or regional regulators on the role reserved for the "financialised" commodity markets:

- ◆ That these markets operate for the best in the short term to ensure that essential resources are allocated efficiently to the economy (capital formation, transfer of risks, optimum allocation of production means, etc.) is obviously based on consensus

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- ◆ On the other hand, there are ambiguities. These concern the desire to use a subjective price signal as a means of optimisation not just a goal in itself, in order to make some of these markets – such as the CO₂ market – act in the medium term like a transition tool towards less polluting production methods⁸⁶. Another ambiguity involves the acceptance to convert these markets, which were initially for hedging between professionals, into investment (or "speculation") markets increasingly open to private investors, who are thus exposed to movements similar to those seen in the share markets (major upward or downward variations based on collective expectations, bubbles, etc.)⁸⁷

The risks associated with these missions have to be managed:

- ◆ Macro-economic risk (i.e.. the risk that the function of optimum allocation of resources of these markets dysfunctions to the detriment of the world economy) is a historic concern that must be dealt with mainly through improved knowledge of fundamentals in order to provide the market with relevant information and optimise price formation;
- ◆ Systemic risk as understood by the financial sphere, i.e. major disruption of the financial system, becomes a clear risk in financialised commodity markets and must also be controlled
- ◆ Finally, it is even more crucial to deal with more "micro-economic" risks in terms of protecting investors, particularly individual investors (risk of abuse of dominant position, no insider trader, false information, price manipulation, etc.). Historically, these professionals-only markets were not subject to such stringent regulations as financial instrument markets open to private individuals, typically the share markets.

It is important to define what a financialised commodity market is, as not all commodity markets can be qualified in this way. Those that are, however, through the respective volume of derivative instruments or financial instruments negotiated against an underlying asset (criteria to be defined in the knowledge that a qualitative assessment will always be necessary in a changing context), must be subject to harmonised or even centralised regulation, so that there is no "rift" between market authority and (any) sector authority. This is true at national, European and international level. Markets already financialised or about to be include oil, gas, electricity, coal, some metals, large agricultural markets and CO₂ quotas.

Proposal 3: Define the financialised commodities markets and introduce a specific approach for these markets in terms of regulation and governance.

Suitable governance, mainly European, must be set in place once these markets have been defined. The main difficulty is that, legally and culturally speaking, the market regulators and competition authorities (or sector regulators if they exist) have widely differing tasks and skills, although they overlap in some instances. These authorities must be mobilised to cooperate and define between themselves a legally-robust line of demarcation which is effective in practice. Thus, roughly speaking:

- ◆ Financial authorities (central banks and market regulators) would retain the authority to monitor the systemic risk and to combat market abuse

⁸⁶ For example, this raises the question of an energy policy - especially for oil - consistent with the policy on regulating CO₂ emissions, where the goal of a market for quotas and derivatives is precisely the reduction of such emissions.

⁸⁷ Although the correlation of oil markets with other financial markets and the economic situation in the widest sense seems to have been demonstrated in the early 2000s, the question of knowing whether this correlation has fundamental (expectations for demand for oil) or financial (investor trust/mistrust cycle) causes is not clear-cut (see on this point part 1.2.3 of this report).

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- ◆ Sector authorities (where they exist, as this is not true of all sectors) should concentrate on monitoring and, where relevant, supervising fundamentals, promoting competition in the widest sense, and so on.

In any case, for these markets it is important to close up the cultural and legal "hole" between authorities. This is obviously crucial in Europe, which is in dire need of harmonisation. The Working Group is therefore promoting the idea of a trans-sectoral authority for the European Union that would be responsible for supervising commodity markets. It would concentrate on harmonising national regulations in physical markets, as well as on improving the operation and transparency of these markets and any problems of competition that might arise.

Proposal 4: Spearhead development and rationalisation, on a global scale, and particularly at European level, of sectoral and financial regulation of these markets. The new European financial markets authority, the ESMA, in conjunction with the ESCB, should have a wider role, particularly in monitoring and controlling the systemic risk and protecting investors (fight against market abuse). A new trans-sectoral authority in charge of regulating and supervising commodities should also be set up. The connection between the two authorities should be optimised on a case-by-case basis, depending on the commodities involved (agricultural products, raw materials, energies, CO₂ quotas, etc.).

Proposal 5: Optimise the connection nationally between the Financial Market Authority and the sectoral regulator(s) like the Energy Regulation Commission, both legally (linking texts) and practically (putting together cooperation conventions).

Proposal 6: Set up permanent, structured international cooperation – not on a one-off basis as is now the case – between the IOSCO and the International Energy Agency, for the benefit of the Financial Stability Board and ultimately the G20.

In the wake of the 2008 financial crisis, regulation content guidelines should be applied based on assigned tasks and risks relating to these markets. This mainly involves regulating the triple combination of structures/participants/products that is inseparable from these markets. We must therefore:

- ◆ Regulate all actors – banks as well as hedge funds and, in some cases, non-financial participants (see below, part 3.2.2 on the special case of oil markets)
- ◆ Develop and regulate appropriate market and post-market infrastructures (regulated markets and organised platforms, CCP, trade repositories, etc.)
- ◆ Regulate OTC derivatives by 1) making exhaustive transparency vis-à-vis the financial authorities mandatory for all users, 2) insisting on computerisation and overall operational and legal robustness of contracts as much as possible, 3) encouraging (or enforcing) full standardisation in order to allow central counterparty clearing (CCP), and 4) encouraging the widest possible establishment of organised (MTF) or regulated markets on the NYMEX or ICE model

In Europe, these guidelines mean applying all the proposed overall measures to any financialised commodity market that involves incipient systemic risk, as laid out in the communication from the European Commission on 20 October 2009⁸⁸ and the decisions of the Board of Governors of the Central European Bank on central counterparties:

- ◆ Ensure total transparency of OTC derivatives by setting up at least one trade repository in Europe, or even in the euro area. Use this trade repository for systemic supervision, to combat market abuses (mainly price manipulation) and, if appropriate, to contribute to the post-trade information to optimise price formation.

⁸⁸ The Commission communication of 20 October does not exclude commodities from its scope.

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- ◆ Carry out a detailed analysis of all types of OTC derivative contract (forward cash, futures, swaps, options, etc.) eligible for standardisation and central counterparty clearing and MTF, even regulated market transactions
- ◆ Under the control of public authorities and regulators, push for maximum standardisation technically accessible to OTC derivatives in commodities to make centralised clearing mandatory via at least one house set up in the euro zone for euro-denominated instruments⁸⁹
- ◆ Promote the development of organised or even regulated markets for relevant OTC derivatives
- ◆ Where exceptions may be made (OTC derivatives that cannot be standardised, possible exemptions for the non-financial sector, etc.), introduce, in addition to transparency for regulators, rules concerning governance, due diligence, collateralisation, differential capital charge, computerisation, etc.

In anticipation of trade repositories, the best information available on OTC transactions should be acquired from market participants, these participants should be categorised uniformly at international scale and the corresponding aggregated data published⁹⁰.

It would also be worth studying the possibility of extending trade repository registration to some commodity contracts from the "physical world" (especially physical forward contracts). If this is not feasible, paths offering an equivalent degree of transparency should be investigated (especially data from Customs and Excise and taxation offices).

Proposal 7: For all the financialised commodities markets, based on the associated risks and especially the existence of systemic risk, apply the G20 guidelines on financial markets in response to the crisis, mainly through transparency of transactions, standardisation and centralised clearing of contracts (see the measures recommended by the European Commission in its communication of 20 October 2009). Consider the option of extending some of these measures to the physical market for the most relevant contracts in terms of price formation, or equivalent arrangements guaranteeing a same degree of transparency.

These proposals gain in significance given the persistence of very considerable imbalances in world flows of saving; it is certainly most unwise to exclude a new contango in the liquidity commodity markets seeking better remuneration than offered today by sovereign bonds.

3.2.2. Application to the special case of oil markets

The oil markets (crude and refined products) can clearly be qualified as "financialised commodity markets", and the measures listed above must therefore be applied to them.

In the special case of oil, nevertheless, these guidelines imply a twofold thought process:

- ◆ The first involves the notion of "financial product": the legal notion of a financial instrument defined in the MiFID means that, for example, an oil future deliverable in cash will be viewed as a financial contract falling under the competence of the FMA, whereas a physically deliverable forward will not. The proximity of two instruments and the arbitrage options for either one could call for a revision of these rules.

⁸⁹ As reiterated by the Board of Governors on 16 July 2009, the Eurosystem supports an on-going policy of localisation of clearing infrastructures negotiating euro-denominated products. It is vital to establish a house within the euro zone to give it access to the central bank facilities which can especially be a decisive factor in dealing with failure of a participant correctly. It provides direct, efficient supervision of the organisation and operation of these clearing houses, a corollary of access to the central bank money.

⁹⁰ The IOSCO task force on commodities (see above part 2.2.3 is currently focusing on this transitional phase.

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- ◆ The second involves the notion of a "financial participant": the banks are obviously considered to be regulated entities, but other participants (hedge funds, sometimes trading subsidiaries of major utilities or large traders in petroleum products) are not.

In this respect, the prevailing situation in European oil markets must lead to the very serious consideration of applying CESR and CEBS⁹¹ recommendations on exemptions to the status of investment service provider (ISP) to this sector:

- ◆ Only own-account entities should be exempt, as the current dispensations based on status (corporate or financial) or activity volumes (ancillary nature of the activity in derivatives) are no longer relevant
- ◆ As soon as an entity – financial or otherwise – maintains contractual relations with customers, regardless of their status, as consultant, seller of financial products or provider of liquidity, it must be given PSI status with all that that entails
- ◆ Conversely, there is a clear line of demarcation between entities (actively) marketing financial products to the general public and those limiting themselves to inter-professional relations. Tighter rules must be envisaged for the first category, over and above those governing the products themselves (ETF, structured notes, etc.).

If appropriate, the issue of a special status for commodity traders could also be raised.

Rationalising regulations to fit the special case of commodities, oil in particular, requires not just redefining financial instruments, but a certain flexibility in defining the participants, structures and products eligible for the "financial regulation" discussed above, which should be considered under the MiFID revision⁹².

Proposal 8: Update the MiFID (restricting exemptions to the status of ISP and studying a new status specific to oil traders, extending the scope of eligible contracts to include contracts other than financial contracts, etc.) consistent with the recommended guidelines for regulation of over-the-counter oil derivatives.

Without entering the aforementioned debate (see part 3.1) on the transparency of fundamentals (stocks, refineries, etc.), we note that the financial sphere can, under a given transparency of the fundamentals, help improve price formation. This is already true by constructing derivative markets themselves: beyond that, thought must be given to a holistic approach towards improving price formation and, to achieve this, using infrastructures newly created under the reform (trade repositories, CCPs, MTFs and regulated markets). The post-market information made possible by the trade repositories could play an essential role in setting up more transparent price references.

Proposal 9: Use all new market infrastructures thus created (especially trade repositories) to improve post-trade transparency and, consequently, the price formation process.

3.3. Introduce specific rules for financial markets in oil

In addition to applying the G20-approved guidelines to the financial oil derivative markets, which basically respond to concerns over transparency and the prevention of systemic risk, the Working Group has singled out three areas for action. Although the areas cover commodity markets as a whole, they apply directly to the oil sector: protecting investors, building up the price formation role of the market and taking the concentration level of participants into account.

⁹¹ Committee of European Securities Regulators and Committee of European Banking Supervisors.

⁹² Whilst factoring in the recommendations of Pierre Fleuriot's working group on the MiFID Review.

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So far, these three points have not been widely addressed on an international scale⁹³. They are significant, however, and could be advanced by France within the context of G20 and European discussions. Once again, France cannot act alone and should mobilise its partners for this purpose.

3.3.1. Provide better protection for investors

In recent years, index funds have expanded strongly into the commodity derivative markets, especially oil. They target professional investors – pension funds, hedge funds, etc. – but also small investors and private individuals, mainly via ETFs, which are inherently complex products (see part 1.2.2). The relatively limited cost of entering these specific derivative markets⁹⁴ has also facilitated the rush for commodities.

The lacklustre results of some of these funds naturally raise the question of how much protection should be provided for inexperienced investors.

Both market and public authorities view moves by petroleum products towards "standard" asset classes, with macro-economic (risk of correlated measures as the share of investors increases) and micro-economic (modest, yet increasing arrival of investors in these markets) consequences, as arguing for the appropriate regulatory conclusions. The entire problem has its roots in the necessary balance between protecting increasingly less professional and therefore inexperienced investors and the efficiency of an inter-professional market designed to optimise the interests of consumers, industrialists, producers, etc.

Purely and simply banning these products⁹⁵ from being marketed seems extreme (this is already widespread in the United States but restricting access in Europe would be extremely difficult), rather it is important to make sure that they are clearly classified under the MiFID, which provides extended protection for investors, and that all the rules provided for within this framework are fully respected.

The European ISPs likely to market oil financial derivatives actively to the general public are governed by rules of behaviour, especially with respect to:

- ◆ Information given to the customer on the risks, costs and miscellaneous expenses⁹⁶
- ◆ Obligations of the council when this exists
- ◆ Preventing and managing conflicts of interest, especially between own-account activities and those on behalf of third parties. This includes the obligation of "better execution" in favour of the customer and the "Chinese wall" between the analysts whose publications and recommendations are designed to be made public.
- ◆ Protecting assets (via a custodian)

Proposal 10: In addition to extending the field of participants subject to the status of ISP and therefore to its conditions, draw the appropriate conclusions from the arrival of individual investors in the oil markets and the active marketing of financial products in this sector: apply exacting rules vis-à-vis conflicts of interest, consultancy, asset custody, classification (as complex product), information and transparency (on the costs, risks, etc.) to these products, and when marketing them to the general public.

⁹³ But some have incited lively debate in the US, initiated by Gary Gensler in particular (see Part 2 of the report).

⁹⁴ Typically, the initial margin calls on the purchase of commodity futures rarely exceed 8% to 10% of the notional price of the contract. The initial deposit in share markets can be as much as 50%. The risk differential does not justify such a gap.

⁹⁵ The same question is raised for example for CO₂ quotas: both issues should be dealt with coherently.

⁹⁶ With, for example, introduction of a two- or three-page Key Information Document on the product risk level within the context of discussions on the European Package Retail Investment Products.

3.3.2. Acquire tools to confirm the price-revealing role of the market

Here we are taking up the extensive debate in the United States on the role of position limits and margin calls, be it in derivatives traded in regulated markets or in over-the-counter markets. The Working Group believes that these instruments cannot just be seen from the angle of preventing market abuse or protecting against counterparty risks, whether systemic or not.

From the outset (see above, part 2.2.2), the philosophy of the American authorities has been that, in the special case of commodity derivatives, given their importance for the real economy, position limits are also designed to combat "excessive speculation", which is understood as generating huge price fluctuations that can distance the market from its fundamentals. This goes beyond the traditional concept of a market regulator whose role is simply to make sure that the market functions in a fair and orderly fashion. Absolute position limits⁹⁷ are therefore justified, with no need necessarily to demonstrate explicitly that this or that category of market participant is likely to force the prices away from their fundamentals. Note in this respect that the question of limits does not arise for the share markets, as it is in fact dealt with by the miscellaneous accountability levels (declarations of crossing, declarations of intent, mandatory offers).

Experience rather than exact science thus dictates the level and implementation of these position limits, but the principle remains the same, if only for two reasons:

- ◆ Being able to play a potentially dissuasive role in relation to long investors who are not bothered by price levels in their investment strategy, or to combat herding
- ◆ Having regulations consistent with their transatlantic counterparts, unless we wish to see the American authorities developing extraterritorial intervention strategies designed to an extent to stop activities being delocalised to other financial marketplaces

Proposal 11: React accordingly to the mixed nature of the oil market by standardising the principle of position limits in the financialised commodities markets, including oil, as an instrument used not only to prevent market manipulations, but also to reduce the macro-economic (poor allocation of capital generating excessive volatility), even systemic (financial collapse of a major, over-exposed participant) risks.

Margin calls and capital obligations, which may be made mandatory for investors in commodity derivatives, especially oil, may be looked at closely, albeit indirectly:

- ◆ One lesson learned from the events of 2008-2009 is that faced with the desire by institutional investors to take speculative positions in the long-term oil prices, there was not enough liquidity in the most forward terms in the futures curve. The result was that investors took positions with liquidity, in the shortest maturities⁹⁸
- ◆ The anticipated "intrinsic" value of the spot price from a balanced supply and demand (apart from the odd stock effect) could therefore have been affected by the expectation of fundamental situations only due to develop in several years time
- ◆ These conditions prompt questions on the potential role of call margins and capital obligations to re-orient the liquidity the length of the curve of maturities open to trading, by gradually modulating their level as the delivery term approaches so that, ultimately, physical meets term

⁹⁷ And not only the position accountability levels, which are simply warning levels.

⁹⁸ Note however that for the ETF, which acquire the bulk of their yield from renewing positions when the market is drifting (i.e. 70% of the time), the investment in the short terms to maturity seems more by choice than by constraint. Conversely, this explains why performances by these funds are mediocre in a contango market.

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It is not easy to implement this type of mechanism⁹⁹, knowing the importance of considering the short- and long-term price volatility when setting initial call margins and capital requirements. The Working Group nevertheless is of the opinion that additional work should be initiated on this point.

Proposal 12: Launch an in-depth study on the use of margin call and capital requirement mechanisms as instruments to increase liquidity in the longest terms to maturity on the futures curve. Check that in the oil sector, clearing via CCPs will impose capital and liquidity restrictions reflecting – no more and no less – the true risk.

3.3.3. Take the degree of concentration of market players into account

One of the major issues in the discussions on new regulations for financial markets is how to contain systemic risk. When the American insurance company AIG filed for bankruptcy, the international financial system probably came closer to this ultimate risk than at any other time in its recent history. It is a worrying fact that the bankruptcy of a single participant can put the entire financial system at systemic risk simply through its weight in the Credit Default Swap (CDS) market, i.e. credit derivatives used to cover the risks of companies defaulting on their debts. In reality, banks use CDSs as much as companies to cover global counterparty risks well beyond a strict risk of default in repaying the debt.

From a systemic risk perspective, the very nature of these instruments and their subsequent use clearly differentiates them from any other type of derivative product. The question can be asked whether or not this or that commodity market is likely to place the international financial system at the same type of risk (hence the proposals put forward above on identifying the most financialised markets). And yet, it must be recognised that the systemic risk in CDSs stems from too much concentrated exposure to these instruments by too few market participants, rather than a dysfunction in the market for CDSs themselves. And with this in mind, it is therefore perfectly reasonable to wonder about the phenomena of too much concentration in the commodity derivative markets.

The lack of detailed data on exposures, OTC-traded volumes and counterparty risks in commodities makes any concentration estimate too debatable for a final judgement. Nevertheless, market participants seem to agree that three or four of the largest investment banks active in this market concentrate perhaps two-thirds, even three-quarters of market shares in certain segments (commodity indices, hedging for companies, exposure in commodity hedge funds, etc.). More globally, all the consultant studies tend to confirm the extreme pyramid nature of the market and above all an increasing rather than decreasing gap between the largest banks and their nearest rivals as time goes on.

The creation of trade repositories to record all OTC transactions, including non-centralised counterparty transactions, is therefore an essential prerequisite to formulating relevant criteria in assessing the risk of concentration. Seemingly, these criteria should take into account exposures from CCP and non-CCP OTC transactions as well as exposures to the futures markets and above all the physical markets. The same banks which today concentrate the most significant exposures in the derivative markets have also developed trading activities in the physical oil market, thereby occasionally becoming the main suppliers of certain end consumer companies.

⁹⁹ From an operational viewpoint, the existence of central counterparties could make it easier to implement this type of incentive measure for call margins. The CCP centralise the call margins, so it would be easier to insist that they operate in this way. From a financial viewpoint, the impacts of these incentives on the global risk profile of the house should nevertheless be measured.

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Finally, it seems that although imposing position limits in the futures markets or the obligation to clear the OTC transactions the easiest to standardise are clearly measures which reduce the counterparty risk, they are not enough to cover the total risk of concentration. Monitoring criteria for measuring the risk of concentration is the only way of controlling that commodity derivative markets do not bear a macro-financial systemic risk or that participants do not play the competition game.

This more than likely assumes specific discussions on the scope and application of the Market Abuse Directive (MAD) to the oil sector.

Proposal 13: Adapt the MAD directive to the special case of oil markets. Based on information gathered from trade repositories on derivatives and from physical markets, investigate the option of reinforcing rules on controlling market abuses and the abuse of dominant positions, by involving the financial regulator, the sectoral regulator (if there is one) and the competition authority.

For the time being, one perfectly possible reform suggested many times to the mission is the imposition of Chinese walls between analysts and traders/sellers in the commodity markets. This would prevent conflicts of interest between the major institutions, financial and non-financial, which are also widely involved in proprietary, or own-account, trading and which, without this being a crime in commodity markets, are guilty of front running¹⁰⁰.

Total separation – already extant in some banks – between own-account commodity activities (especially oil) and those carried out for external customers is a more ambitious reform, but one proposed quite recently by the CFTC¹⁰¹.

The Working Group believes that these measures, which it considers essential when the institutions in question can market products to the general public (see above, part 3.3.1), will gain from being extended to all oil market participants.

Proposal 14: Separate analysts from derivatives traders/sellers in commodities (Chinese wall) if analyses/recommendations are intended for clients.

Proposal 15: More generally, insist on separating own-account activities from activities on behalf of clients.

In this respect, note that these proposals adapted to the financial oil market, are totally in line with the proposals put forward by the American President on 21 January 2010 for the entire banking system.

3.4. Propose a genuine "oil strategy" for the European Union

With the adoption of the Climate and Energy Package in December 2008 under the French Presidency of the EU, Europe has turned a major corner in constructing its energy future. The stated priorities, condensed into the formula "Three twenties by 2020", are energy efficiency (20% improvement by 2020), reduced CO₂ emissions (20% reduction by 2020 over 1990 levels) and the development of renewable energies (which should increase to a 20% share by 2020). Safety of natural gas and electricity supplies is another strategic and priority concern. This vision is slowly being extended towards defining a European energy policy, without oil issues being addressed.

¹⁰⁰ This is a practice whereby a trader takes a position in the market based on information in an analysis note intended for investors, before this note is circulated, or places an order on his own account before that of a customer to reap the benefit from it. Front running can be criticised on ethical grounds, if nothing else, when a major market participant is involved. This practice is not permitted in the share markets.

¹⁰¹ See the speech by Gary Gensler to the Fordham University College of Business Administration on 27 January 2010.

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Europe is a major hub for crude oil and petroleum products. The European Union produces 105 million tonnes of crude oil (2008, basically the United Kingdom, Denmark and Italy); it imports 627 million and exports 60 million. The Union also imports 299 million tonnes of refined products and exports 289 million. Not all the European countries have the same dependency on oil. In terms of total consumption of primary energy, oil accounts for 53% in Spain, for example, and 35% in France.

The European oil sector, which was highly State-controlled in some countries, was fully liberalised in the 1980s. Today the European oil problem is changing. Under the objectives of the Climate and Energy Package, Europe could be faced with reduced demand, growing oil dependency in relation to outside and a greater proportion of refined products in imports. Oil dependency poses the problems of securing physical flows (of crude oil and products) and price volatility.

Here is an opportunity for France to suggest and stimulate the opening of a European priority area. A structural and sustainable response to price volatility is to reduce our global dependency on oil. Henceforth, the mission believes that the Commission should be in a position to propose a genuine "oil strategy" for Europe and that its services are mobilised for this purpose.

3.4.1. Construct scenarios consistent with changes in demand

An essential first step is to construct scenarios to find out the potential effects of the Climate and Energy Package on changing European demand for petroleum products. In the current context, changes in demand will be linked closely to the energy policies that have been introduced by the States *en concertation*. Such an approach could also usefully enrich the producer-consumer dialogue.

Proposal 16: Construct scenarios changes in demand for petroleum products at European scale consistent with the Union's environmental strategy, which will serve in particular to fuel the producer/consumer dialogue.

3.4.2. Monitor petroleum product markets and prices better

Markets and prices are behind the physical flows of crude oil and refined products mentioned above. Between the FOB price for crude oil and the price of petrol at the pump is a long succession of market segments (and industrial processing), all of which help form the end price. One example of these intermediate markets is the barges of products negotiated for delivery in the Antwerp-Rotterdam-Amsterdam ("ARA") zone. It is clear that the volatility of prices for refined products in Europe does not exactly match the volatility of crude oil prices. It can even be suggested that some mechanisms can exacerbate in the product markets price increases that are observed in the crude market.

Overall, the price formation process in the crude oil and refined product market is nowadays infinitely less transparent than the oil futures contracts implemented by the regulated markets like the NYMEX or ICE. Appendix VI to this report assesses the situation prevailing in Europe today and potential measures to improve the operation and regulation of corresponding markets.

The organisation and operation of these markets and the modalities for setting prices (role of publishing agencies like *Platt's* and *Petroleum Argus*) would therefore merit careful examination.

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The Commission could play an active role in monitoring, even regulating physical oil markets likely to fall under its "territorial" competence, as much for concerns over transparency and competition as to ensure consistency with actions undertaken in the financial commodities markets;

Proposal 17: Examine at European level the price formation process in the physical petroleum product markets. Reflect on the economic model for disseminating price information¹⁰² whilst debating the revision of the MiFID.

Proposal 18: Develop obligations of transparency with respect to sectoral/financial regulators of operations in the central market for barges in the Antwerp-Rotterdam-Amsterdam zone (ARA).

Proposal 19: Encourage the emergence in Europe of a platform for physical petroleum product transactions. This would provide adequate post-trade transparency to professionals and the general public, which could possibly be extended later to pre-trade.

3.4.3. Rethink the taxation of petroleum products in light of the new environmental policy

European oil taxation is very disparate. Most products can be traded duty free between professionals, under bond, but some - especially those with organic components - cannot without taking VAT into account. The VAT-inclusive prices for diesel vary from 1 to 1.5 and from 1 to 2 for domestic heating oil. European oil taxation must now be rethought and harmonised in the new energy-carbon context. This is a particularly tricky area, but the new Commission should nevertheless make it a priority. The taxes should reflect the carbon content of various forms of energy and provide strong incentives for consumers to be more energy-efficient.

Proposal 20: Relaunch the debate on European harmonisation and consistency of petroleum product taxation given the Union's new energy priorities.

3.4.4. Continue acting in favour of far greater transparency of petroleum product stocks in Europe

The weekly publication of European petroleum product stocks was suggested above (see part 2.1.3), as was the seemingly little interest shown by our partners in this initiative championed by France and the Commission. The results of the impact study commissioned by the European Commission should prove decisive: failure to conclude that such a publication would be useful, or to commit itself either way, would mean little chance of this measure becoming reality. The Working Group feels that the problem was not posed correctly at the start: it is not a question of knowing whether a publication, whatever its frequency, is likely to reduce the volatility of petroleum product prices all by itself (the answer is clearly no in this case), but whether all market participants (and not just some of them) can access quickly reliable, published information likely to help in forming prices, as in the United States. In addition, under the JODI initiative, Europe must be exemplary.

¹⁰² The discussions should cover the respective advantages and disadvantages of the current model (provider of paying services established freely by the market) and a model more supervised by the regulators.

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The truth is, in practice no European body really takes on the responsibility nowadays of meeting monthly declaration obligations (27 different statistical systems) nor even of checking the existence of reserve stocks at a level actually expected in the OECD area. The desired move to weekly declarations – the jury is still out on their usefulness – is premature: priority should be given to organising the monitoring of stocks at European level, with a frequency of publication of less than the current two months, even if it is only subsequently - i.e. when the 27 countries' "performance" is proven – that the frequency of declarations should be increased.

Proposal 21: Improve the reliability and cut the time taken to publish European stock statistics. Entrust the new trans-sectoral authority supervising commodities with coordinating and updating at European level the publication of relevant information on petroleum stock levels in the territory of each Member country of the European Union and check that each of these countries is complying with its obligations of reserve stocks.

3.4.5. Coordinate energy policies within the Union

Energy policies must now be associated closely with the fight against global warming and defined in relation to the Climate and Energy Package. Changes in demand for petroleum products will be highly influenced by transport policies, implying Europe-wide coordination. In addition, it is essential to encourage actions to control the demand. Flexibility of demand is a major area among these actions: bi-energy facilities (fuel oil - natural gas) allow economically-advantageous substitutions, above all when the price of natural gas risks being disconnected temporarily from the price of oil.

A more dynamic construction of coherent policies which affect energy demand and production in all its forms at Union level is a must today.

Proposal 22: Develop in-depth consultation, under the auspices of the European Commission, on energy policies likely to affect demand for petroleum products in the Union.

CONCLUSION

Oil and petroleum product prices are the result of a complex interaction between the physical and financial fundamentals; this intrinsically creates volatility. The various regulatory reforms currently being developed, especially for the commodity derivative markets, seem unlikely to reduce this growing volatility by very much. Reforms also run up against technical difficulties, as well as frequently strong resistance from the financial community, whilst the market and systemic risks remain. At a time when the international community is demanding better regulation of the world economy, this context lends itself to extensive dialogue, negotiation and coordination between participants to deal with these risks and price volatility better.

The Working Group recommends three main areas for attention: strengthening producer/consumer dialogue, reinforcing regulation of derivative markets (and also physical markets) and initiating a genuine European oil strategy. These guidelines imply that France should develop a genuine "oil diplomacy" at a particularly crucial moment in the history of energy, as we must produce more energy, mainly for the economic development of the poorest, whilst at the same time reducing our greenhouse gas emissions.

This oil diplomacy must be developed at several levels: our G20 and European partners, producer-exporter countries and developing, oil-importing countries.

- ◆ In-depth discussions with our G20 partners are necessary to move on-going work forward. The question of oil price volatility was raised within the G20, partly at the initiative of France, which has given a mandate to the International Energy Forum, the International Monetary Fund and the Financial Stability Board on this question. The oil issue is part of the problem of reforming the financial markets. It is therefore important that our partners agree with the idea of maintaining pressure on these subjects.
- ◆ Dialogue already exists with oil-exporting countries, but must be reinforced with France playing a more active role in the International Energy Forum as well as in the EU/OPEC dialogue. Bilateral exchanges with specifically targetted countries could lead beyond oil to issues of energy policy.
- ◆ The oil issue is not widespread as a European policy matter despite oil being our leading primary energy. Discussions with our partners would help to include oil more in the Union's energy issues.
- ◆ Many developing countries are also facing the question of oil dependency. At a time when the World Bank is redefining its energy strategy for these countries, France has a role to play in the cooperation and strategic principles of this policy, not just in terms of oil dependency.