

DUGOROČNI IZGLED CIJENA NAFTE I PLINA

LONG-TERM PROSPECT OF OIL AND GAS PRICES

Nikica Grubišić, Zagreb, Hrvatska

Otkad je tržišta, izražen je interes za spoznajom budućeg kretanja cijena. Onaj, čija je spoznaja bila bliža ostvarenju, bio je u višestrukoj prednosti pred drugim sudionicima tržišne utakmice. Kad je riječ o nafti, sve to postaje još zanimljivije. Nafta je vjerni pratilac cikličkog razvoja kapitalizma, a zarade na promjeni cijene nafte postale su veće od zarade na samoj proizvodnji nafte. Stoga je u ovom radu pokušano sagledati dugoročni izgled cijena nafte i plina kroz analizu tržišta kapitala, a ne kroz složene ekonometrijske modele, kako je to uobičajeno.

Ever since the market was formed, people have been interested in the future prices fluctuations. The one whose cognition was closer to the realization had leverage in comparison to other participants of the market competition. When it comes to oil, it becomes all the more interesting. Oil is a loyal companion of the cyclic development of capitalism, and earnings from changes in oil prices have become greater than the earnings from the production itself. Therefore, this paper endeavours to consider the long-term oil and gas prices prospect through capital market analysis rather than through the usual complex econometric models.

Ključne riječi: izgled cijena; nafta; plin; faktori determinacije
Key words: prices prospect; oil; gas; determination factors



Diesel

1 UVOD

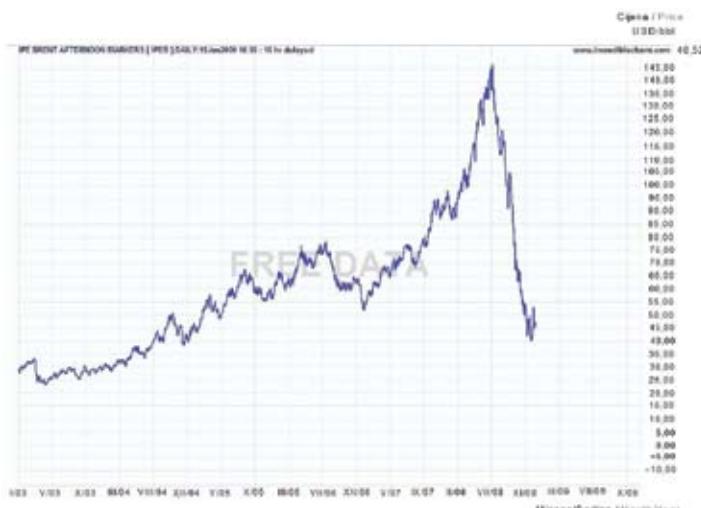
Velike oscilacije cijena nafte na svjetskom tržištu, relativno brže i značajnije od početka sedamdesetih godina, kao bogom su dane za izradu različitih scenarija budućih zbivanja i cijena nafte i plina na svjetskom tržištu.

Autori scenarija, uglavnom američki, gotovo se natječu u pogađanju i grijesku oko očekivanih kretanja cijena nafte (slika 1). To stoga je atraktivno (stvar prestiža), ali i nemoguće pogoditi kretanje cijena nafte (zbog neočekivanih faktora utjecaja i problem njihove kvantifikacije), tako da im je bila osigurana dugotrajna i zabavna igra. Razlog tome je što se ne zarađuje samo na proizvodnji nafte, već i na njenoj cijeni. Točnije, na promjeni te cijene. A zarade na promjeni cijene su velike, koji puta veće od zarade na samoj proizvodnji nafte.

1 INTRODUCTION

Significant oscillations of prices on the world market, which are relatively quicker and more significant than they were at the beginning of the seventies, are as if god-given for the elaboration of different scenarios of future events and oil and gas prices on the world market.

Authors of scenarios, mostly Americans, are almost competing in guessing and mistaking the expected prices fluctuations (Figure 1). That is because it is attractive (a matter of prestige) but also impossible to guess the oil prices fluctuations (because of unexpected impact factors and the problem of their quantification), so that they will surely be enjoying a lasting and fun game. The reason for that is the fact that oil production is not the only source of profit, but its price as well. More precisely, the change of that price. And profits from price changes are great, sometimes even greater than the profits from oil production itself.



Slika 1 – Kretanje cijene nafte Brent [2]
Figure 1 – Oil prices fluctuations Brent [2]

Nakon puno godina igranja, promatrači su, izgleda, postali svjesni nemogućnosti točne procjene zbivanja na svjetskom tržištu nafte. Jedan od direktora Agencije za energetiku OECD-a (Georg Lamsden) na pitanje o očekivanoj cijeni barela nafte, sad već davne 1991. godine odgovorio je, kako se točan odgovor može dobiti samo u raju za budale. Osobno bih otisao tako daleko i oprezno se suglasio s najmudrijim stručnjacima koji predviđaju da će se cijene nafte kretati između 20 USD/bbl i 150 USD/bbl.

Unatoč oprečnim mišljenjima o procjenjivanju kretanja cijena nafte, znanstveno je moguće

After years of playing the game, the spectators have apparently become aware of the impossibility to estimate accurately the events on the world oil market. When asked about the expected price of the oil barrel, one of the directors of the International Energy Agency of the OECD (Georg Lamsden), as early as in 1991, replied that the exact answer can only be gained in fool's paradise. I would personally go that far and carefully agree with the wisest experts who predict that oil prices will fluctuate between 20 USD/bbl and 150 USD/bbl.

In spite of contradictory opinions on the estimations of oil prices fluctuations, it is scientifically possible

odrediti granice, unutar kojih se, uz određenu vjerojatnost, može očekivati njeno kretanje. Da bi uz visoku vjerojatnost te granice bile što bolje pogodjene (što preciznija procjena), nužno je identificirati i kvantificirati faktore koji determiniraju kretanja cijena nafte, te ekonometrijskim modelima izvršiti procjene.

2 GRANICE RASPONA CI-JENE

Minimalna cijena, određena je uvijek (za oskudne resurse) maksimalnim (graničnim) troškovima proizvodnje, uvećanim za profit. Isti zakon vrijedi i za donju granicu cijene nafte. Tu granicu će uvijek određivati troškovi proizvodnje posljednje potrebne, dakle najskuplje, jedinice proizvedene nafte.

Za razliku od minimalne cijene, koja je određena troškovima proizvodnje nafte, maksimalna cijena je određena platežnom spremnošću (sposobnošću) potrošača naftnih derivata, koja se obično iskazuje kroz elastičnost tražnje derivata nafte.

Cijene će se uvijek kretati unutar tih dviju granica. Problem je jedino u tome što su maksimalni troškovi proizvodnje nafte uvijek puno niži od platežne spremnosti potrošača. Upravo zbog veličine te razlike, prisutne su i velike oscilacije cijena. Ta činjenica pospješuje trgovinu s cijenama (ugovorima).

U uvjetima krize dolazi do kontrakcije potrošnje, smanjuje se potražnja, pa se i granična proizvodnja troškovno pomiče naniže. S njome, naniže se pomiče i minimalna cijena. U uvjetima gospodarske ekspanzije, različitim finansijskim instrumentima povećava se platežna spremnost potrošača, jača trgovina ugovorima, a s time ekspandira i maksimalna cijena nafte. Dakle, dok je minimalna cijena nafte određena realnim faktorom, troškom, maksimalna cijena nafte određena je tržišnim, špekulativnim parametrima.

Na slici 1 se vidi da su uspostavljene granice fluktuacije cijene nafte između 30 USD/bbl i 150 USD/bbl. U regularnim uvjetima cijena nafte će fluktuirati u tom rasponu. Izvanredne okolnosti u uvjetima krize ili prosperiteta mogu odrediti i širi okvir fluktuacije.

3 FAKTORI DETERMINACIJE

Pri sagledavanju budućeg kretanja cijena nafte (i plina) na svjetskom tržištu nužno je lučiti

to determine the boundaries within which, with a certain probability, their fluctuation can be expected. In order to guess as closely as possible those boundaries with a high level of probability (the most detailed estimate possible), it is necessary to identify and quantify the factors which determine the oil prices fluctuations, and to undertake estimations by virtue of econometric models.

2 BOUNDARIES OF PRICE RANGES

Minimum price is always determined (for scarce resources) by maximum (cut-off) production costs increased by profit. The same rules apply to the lower oil price boundary. That boundary will always be determined by production costs of the last required, that is, of the most expensive unit of the produced oil.

Unlike the minimum price which is determined by oil production costs, the maximum price is determined by the paying capacity of the consumers of oil derivatives, and this capacity is usually shown through the elasticity of demand for oil derivatives.

The prices will always fluctuate between those two boundaries. The only problem is that maximum oil production costs are always significantly lower than the consumers' paying capacity. Exactly due to the extent of that difference, great price oscillations are also present. That fact enhances the price (contract) trade.

In the circumstances of crisis, there occurs a contraction of consumption, demand decreases, and so, in view of costs, the cut-off production also moves downward. And with the cut-off production, the minimum price moves downward as well. In the circumstances of economic expansion, various financial instruments are used to increase the consumers' paying capacity, strengthen the contract trade, and concurrently expand the maximum oil price as well. Therefore, while the minimum price of oil is determined by the real factor - the cost, the maximum price of oil is determined by the market - the speculative parameters.

Figure 1 shows that oil price fluctuation boundaries have been set up between 30 USD/bbl and 150 USD/bbl. In regular conditions, the price of oil will fluctuate within that range. Extraordinary conditions in the circumstances of a crisis or prosperity may determine a wider fluctuation range.

3 DETERMINATION FACTORS

When contemplating the future oil (and gas) price fluctuation on the world market, it is necessary to

kratkoročne poremećaje od dugoročnih faktora determinacije kretanja na svjetskom tržištu nafte (i plina) (slika 2).

Kratkoročne poremećaje čine razni oblici prirodnog ili društvenom podrijetla, lokalnog karaktera, bez mogućnosti značajnijeg utjecaja na globalna zbivanja, na svjetskom tržištu nafte (i plina). Premda kratkoročno mogu dovesti do manjih ili većih poremećaja na svjetskom tržištu nafte (i plina), ti faktori nisu od većeg značenja pri sagledavanju dugoročnih kretanja cijena nafte (i plina).

Dugoročni, tj. faktori determinacije kretanja na svjetskom tržištu su od presudne važnosti za kretanja cijena nafte i plina.

Zapadnim ekonomijama, posebno privredi SAD, imanentni su izraženi ciklusi u razvoju. Američki ekonomisti su, uglavnom prestrukturiranjem privrede, uspijevali prilično dobro rješavati probleme recesije, u prošlom stoljeću.

Kao i više puta prije toga, tijekom 1990. godine, američki ekonomisti su ustanovili prve znakove nadolazeće recesije. Došlo je do pada privredne aktivnosti, rasta nezaposlenosti i inflacije. To je bio dovoljan znak State Departmentu da se mora pozabaviti s vrlo ozbilnjim problemom. Kako je tijekom 80-tih godina već izmijenjena gotovo cijelokupna privredna struktura zemlje, to je ta mogućnost u svrhu oživljavanja privrede, ovaj puta isključena. Vrlo prikladno, međutim, moglo je poslužiti iznalaženje tržišta koje će apsorbirati velike količine industrijskih proizvoda. I krenulo je s tzv. globalizacijom. Mobilnost proizvodnih faktora pogodovala je njihovu seljenju na jeftinija područja, ponajviše u Kinu, Indiju i istočnu Europu.

Ako se uz to ostvari još i jeftina energija, onda je uspjeh siguran. Smanjenjem troškova proizvodnje pridonosi se eliminaciji razornog djelovanja (troškovne) inflacije po razvijene zapadne ekonome. Tako je i bilo. Stvorena su golema nova potrošačka područja, i kapitalizmu je bilo zagaran-tirano preživljavanje idućih 1 do 2 krizna ciklusa (8 do 16 godina).

Novi krizni ciklus, uslijedio je 2000. do 2003. godine. Riječ je o tzv. dot-com krizi, i relativno je lako svladanja. Novi ciklus gospodarskog rasta vrlo brzo je dosegao prethodne vrhunce. Finansijska aktivnost razvila se do neslućenih razmjera. Obilje raspoloživa novca pogodovalo je rastu potražnje, širenju finansijske industrije, ali i zapostavljanju realnog sektora gospodarstva. Bila je to klica nove krize.

excrete short-term disturbances from long-term fluctuation determination factors on the world oil (and gas) market (Figure 2).

Short-term disturbances include various forms of natural or social origin and local character, without the possibility of significant impact on global events on the world oil (and gas) market. Although in the short-term they may lead to minor or greater disturbances on the world oil (and gas) market, those factors are not of greater significance when contemplating long-term oil (and gas) prices fluctuations.

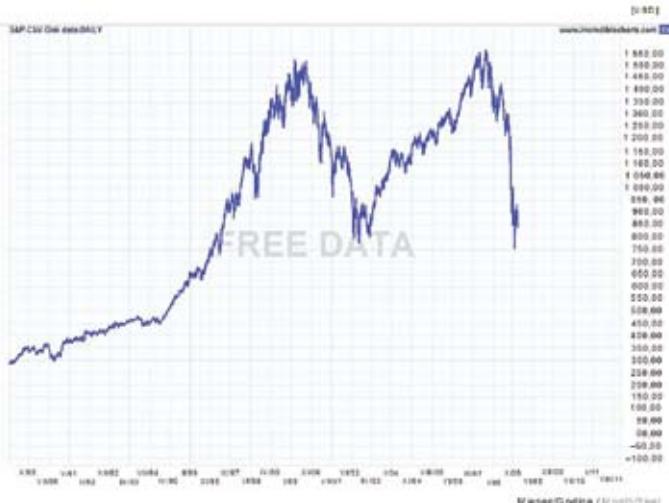
Long-term factors, that is, determination factors of world market fluctuations, are of key importance for fluctuations of oil and gas.

Pronounced development cycles are immanent to western economies, especially to the economy of the USA. In the past century, mostly by re-structuring the economy, the American economists have been quite successful in solving the recession problems.

Just as many times before, during 1990, American economists established the first signs of the upcoming recession. There occurred a fall in the economic activity, growth in unemployment and inflation. That was a sign indicative enough for the State Department to realize that they have to deal with a very serious problem. As almost the entire economic structure of the country had been modified during the 80s, that possibility for the purpose of revival of economy is excluded this time. However, finding a market which would absorb great amounts of industrial products could have been very expedient. And the so-called globalization was launched. The mobility of production factors favoured their moving to cheaper regions, mostly to China, India and Eastern Europe.

If cheap energy is also realized along with that, then success is ensured. The reduction of production costs contributes to the elimination of the destructive effect of the (cost) inflation on the western economies. And that is what happened. Enormous new consumer areas were created and capitalism was guaranteed to survive the next 1 to 2 crisis cycles (8 to 16 years).

The new crisis cycle ensued in 2000 to 2003. The matter at hand is the so-called dot-com crisis and it was overcome relatively easily. The new cycle of economic growth reached the peaks of the previous period very quickly. Financial activity developed to unexpected proportions. An abundance of available money favoured the growth of demand, expansion of the financial industry but also the neglecting of the real economy sector. That was the seed of the new crisis.



Slika 2 — Kretanje vrijednosti S&P 500 indeksa [2], [3]
Figure 2 — S&P 500 index value fluctuation [2], [3]

A onda je uslijedila aktualna kriza. Greška u finansijskoj sferi (zbog kolapsa hipotekarnog tržišta u SAD-u) dovela je do otkrivanja svih sustavnih slabosti. Bez kvalitativno novih proizvoda, realni sektor ostajao je bez jednog po jednog dijela potražnje, pa je i sam završio u krizi [1].

Gotovo nulte kamate na kratkoročne pozajmice novca američkoj državi ukazuju na prestanak međusobnog financiranja banaka, odnosno gospodarstva od strane banaka. Tek kad počne rast potražnja za novcem, doći će i do oživljavanja gospodarske aktivnosti u SAD-u, a prva indikacija će biti porast kratkoročnih kamatnih stopa.

And then the present crisis ensued. A mistake in the financial sphere (because of the collapse of the mortgage market in the USA) brought about the uncovering of all system weaknesses. Without qualitatively new products, one by one, the real sector remained without parts of the demand and ended up in crisis itself [1].

Almost zero interest on short-term money loans indicated to USA that the inter-financing of the banks, that is, the financing of the economy by the banks came to a stop. A revival of the economic activity in the USA will not happen before the demand for money starts to increase, and the first indication of this will be the growth of short-term interest rates.



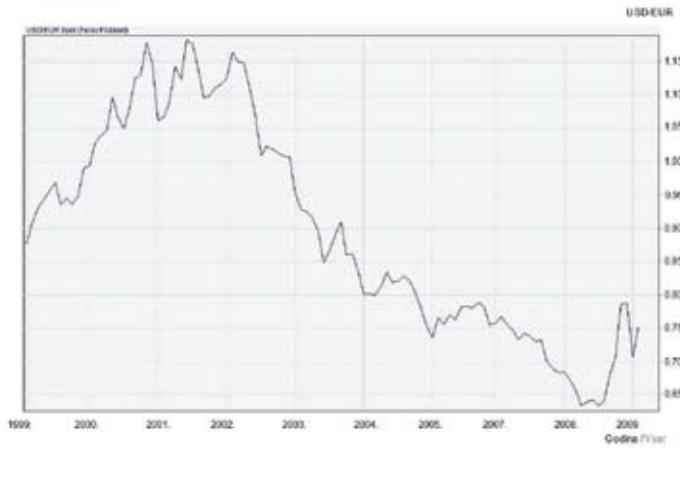
Slika 3 — Kretanje kamatne stope na 3-mjesečne trezorske zapise u SAD [2]
Figure 3 — Fluctuations of interest rates on 3-month treasury securities in USA [2]

Jedan od najznačajnijih faktora determinacije je USD (američki dolar) obračunska i valuta plaćanja u svjetskoj trgovini naftom. Iz ove konstatacije, uočljiva je dihotomija dolara, i to, kao nacionalne valute SAD-a i kao obračunske i valute plaćanja u svjetskoj trgovini naftom.

Dakle, politikom tečaja, SAD preko dolara izravno mogu i utječu na cijenu nafte.

One of the most important determination factors is the USD (American dollar) accounting and payment currency in world oil trade. This fact also reveals the dichotomy of the dollar, and that both as the USA national currency, and as the accounting and payment currency in world oil trade.

Therefore, by virtue of the currency politics, the USA can and do directly influence the price of oil.



Slika 4 – FOREX paritet USD/EUR [2]
Figure 4 – FOREX USD/EUR parity [2]

Primjerice, sredinom prošle godine cijena američkog dolara je pala ispod 0,7 EUR. Na taj način je realna vrijednost nafte bila značajno niža od njene nominalne vrijednosti (u to doba iznad 100 USD/bbl).

Pored svjesne politike vlade SAD-a u ostvarivanju svojih interesa politikom tečaja dolara, na vrijednost dolara, pa dakle i na cijenu nafte, izravno utječu i privredne i budžetske prilike SAD-a.

Zbog učestalog ponavljanja, kao faktor determinacije, može se promatrati i nedisciplina članica OPEC-a u pridržavanju dogovorenih proizvodnih kvota. Upravo to je bio osnovni uzrok učestalog narušavanja odnosa ponude i potražnje nafte s izravnim reperkusijama na ravnotežnu cijenu nafte na svjetskom tržištu.

Rast cijena nafte još tamo, od početkom 70-tih godina, donio je veliki kapital zemaljama izvoznicima nafte, ali je doveo i do sve veće supstitucije nafte (u potrošnji) gdje je to bilo moguće (svugdje osim u transportu), pa i do intenziviranja procesa razvoja energetski racionalnijih tehnologija.

Istodobno, rast cijena nafte, omogućio je racionalnu proizvodnju nafte i onim zemljama, izvan

For example, in the middle of last year, the price of the American dollar fell below 0,7 EUR. Thus the real oil value was significantly lower than its nominal value (higher than 100 USD/bbl at that time).

The value of the dollar, and therefore the price of oil as well, is not only influenced by the purposeful politics of the US Government in attainment of their interests by virtue of the dollar currency politics, but these are also directly influenced by economic and budgetary circumstances in the USA.

Because of the frequency of repetition, the lack of discipline of the OPEC member states in complying with the agreed production quotas can also be viewed as a determination factor. This was the very reason of frequent disturbances of the oil offer and demand ratio, with direct repercussions on the balanced oil price on the world market.

Back in the beginning of the 70s, the growth of oil prices brought great capital to the oil exporting states, but it also brought about increasing substitution of oil (in consumption) wherever possible (everywhere except in transport), and even intensified the development process of energetically more rational technologies.

OPEC-a, gdje se to do tada nije isplatilo, zbog visokih troškova eksploracije.

Osnovni ekonomski interes SAD-a je jaka i sve jača privreda zemlje, s ulogom nosioca svjetskog privrednog razvoja. Za to je nužna stabilnost uvjeta privredovanja, prije svega kroz stabilnu cijenu energije, koju je moguće ostvariti kroz stabilne odnose ponude i potražnje na svjetskom tržištu energetika.

Tom interesu sučeljen je interes dijela zemalja izvoznica nafte. Privredno nerazvijene zemlje, ili manje razvijene zemlje, težile su za samostalnim raspolažanjem nad vlastitim izvorima mineralnih sirovina i profitima od njihove eksploracije, prije svega od nafte.

Na kraju, svemu tome treba suprotstaviti interes sudsionika finansijskih tržišta. Obično se u predkriznim vremenima pojačava trgovina ugovorima radi kompenzacije gubitaka iz realnog sektora. Uz hranu, najprikladnija za to je nafta, zbog relativno niske cjenovne elastičnosti potrošnje. Kad kompenzacija ne uspije, ulazi se u krizu. Paralelno s time kontrahirala trgovina ugovorima i cijena nafte svodi se na minimalnu, troškovno definiranu.

4 PREDVIDIVI FAKTORI DETERMINACIJE ZA BUDUĆE RAZDOBLJE

Za razliku od ranijih kriza svijet je u 2009. godinu ušao u pratnji dvaju ekonomskih problema, smanjene privredne aktivnosti (recesije) i smanjenja cijena. Kao posljedica tih dvaju faktora javlja se pad zaposlenosti, a sve ozbiljnija postaje i prijetnja deflacije. Za razliku od prethodnih kriznih situacija, s inflacijom, za ovaj slučaj ne postoje isprobani recepti ozdravljenja gospodarstva.

Do sada su već aktivirane gotovo sve kratkoročne mjere (smanjenje kamatnih stopa, emisije novca, državni otkup dugova, državna finansijska pomoć bankama i poduzećima) – tek s manjim uspjehom na ublažavanju posljedica gospodarske kontrakcije.

U takvim okolnostima izvjesno je daljnje kontrahiranje gospodarske aktivnosti, pa i potražnje za naftom.

Uz nepromijenjene uvjete gospodarsko oživljavanje moguće je očekivati u idućih 3 do 5 godina, kao posljedicu rasta potražnje za trajnijim robama koje će u međuvremenu biti zamijenjene novima, zbog dotrajalosti.

At the same time, the growth of oil prices enabled more rational oil production in those countries as well, outside of OPEC, where it was formerly unprofitable due to high exploitation costs.

USA's basic interest is a strong, and increasingly stronger, national economy, with the role of the carrier of the world economic development. That requires stable economic conditions, primarily through stable energy prices which can be achieved by stable offer and demand ratios on the world energy sources market.

The said interest is confronted by the interest of a part of the oil exporting states. Economically undeveloped countries or less developed countries strived for an independent disposal of own mineral raw material sources and profits from their exploitation, primarily from oil.

Finally, all of this should be confronted by the interests of the participants of the financial markets. In the pre-crisis periods, the contract trade usually intensifies for the purpose of compensation of losses from the real sector. Besides food, oil is the most suitable instrument for that purpose because of its low consumption price elasticity. When the compensation is unsuccessful, a crisis emerges. Simultaneously, contract trade contracts, and the price of oil drops to the minimum, cost-defined, price.

4 PREDICTABLE DETERMINATION FACTORS FOR THE FUTURE PERIOD

Unlike the former crises, the world entered 2009 accompanied by two economic problems - reduced economic activity (recession) and reduced prices. The consequence of those two factors is a fall in employment, and the threat of deflation is also becoming more serious. Unlike the former crisis situations, with inflation, there are no tested recipes for this case – for the recovery of economy.

So far, almost all short-term measures (reduction of interest rates, money emission, state redemption of debt, state financial aid to banks and companies) have been activated – with only slight success in the amelioration of the consequences of the economic contraction.

In such circumstances, further contraction of economic activity, as well as of oil demand, is certain.

If the conditions do not change, economic revival can be expected in the next 3 to 5 years as a consequence of growth of demand for more durable goods which will be replaced by new ones in the meantime, due to their state of dilapidation.

Alternativa je započinjanje proizvodnje kvalitativno novih dobara. U tom slučaju bi potražnja nastupila odmah, bez odgode. Međutim, kvalitativno novih proizvoda nema, a za eventualni njihov razvoj treba najmanje 3 do 5 godina.

U svakom slučaju za izlazak iz krize, prema sadašnjim okolnostima bit će potrebno 3 do 5 godina. To je razdoblje u kojem, također, nije moguće očekivati značajniji rast potražnje za naftom, pa dakle, niti rast njene cijene.

Kad bi već bilo dotaknuto dno postojeće krize, značilo bi to da je dosegnuta i minimalna cijena nafte, oko 35 USD/bbl.

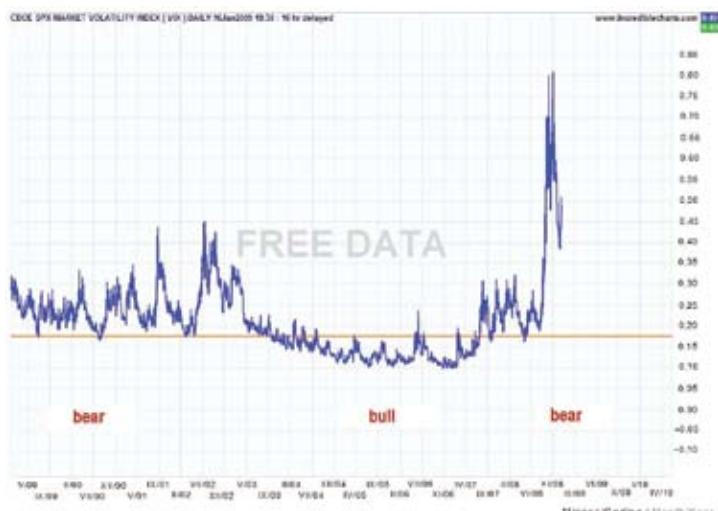
Međutim, indeks straha – VIX američkog indeksa S&P 500 indicira da je velika vjerojatnost da dno krize još nije dosegnuto (slika 5).

The alternative is to launch the production of qualitatively new goods. However, there are no qualitatively new products and their potential development would require at least 3 to 5 years.

In any case, a solution of the crisis, according to the present circumstances, would require 3 to 5 years. That is also the period in which a more significant growth of oil demand or the growth of its price cannot be expected.

If the bottom of the existing crisis were to be reached, that would mean that the minimum price of oil of about 35 USD/bbl would be reached as well.

However, the fear index - VIX of the S & P American Index indicates that there is great probability that the bottom of the crisis has not been reached yet (Figure 5).



Slika 5 — Flndeks straha – VIX [2]
Figure 5 — Fear Index – VIX [2]

Trenutačno je indeks straha na finansijskom tržištu vrlo visok, i nalazi se iznad maksimalne razine, uopće zabilježene, za vrijeme prethodne krize. Tek padom vrijednosti VIX-a ispod 0,17 tehnički će biti potvrđen izlazak iz krize.

Ukoliko doista nije dosegnuto dno aktualne krize, onda nije dosegnuto niti dno cijene nafte.

Eventualnim produbljivanjem krize tehnički je za očekivati daljnji pad cijene nafte, sve do 25 USD/bbl (slika 6).

At the moment, the fear index on the financial market is very high and located under the maximum level, ever recorded, of the former crisis. Technically, the end of the crisis will not be confirmed before the VIX value falls below 0,17.

If the bottom of the present crisis has really not been reached, than the bottom of the oil price has not been reached either.

Potential deepening of the crisis could technically bring about a further fall of the oil price all up to the level of 25 USD/bbl (Figure 6).



Slika 6 — Tehnička analiza Kretanje cijene nafte Brent [2]
Figure 6 — Oil Price Fluctuation technical analysis Brent [2]

Nakon dosezanja dna krize, i započinjanja gospodarskog oporavka, uslijedit će i oporavak cijene nafte. Na kraći rok cijena nafte bi mogla porasti do razine oko 50 USD/bbl, odnosno srednjoročno do 70 USD/bbl, otprilike.

Izlaskom iz krize nastupit će ponovno oživljavanje trgovanja cijenama i daljnog rasta cijene nafte sve do prethodnih vrhunaca.

Sukladno cikličnosti razvoja američkog gospodarstva vrhunac gospodarskog prosperiteta može se očekivati oko 2017. godine.

5 ZAKLJUČAK

Cijena nafte bila je i ostat će vjerni pratić zbiljiva u svjetskom gospodarstvu. Štoviše, kao jedan od najboljih indikatora zdravlja svjetske ekonomije, napose američke kao vodeće i po veličini i po razvijenosti.

U kraćem dolazećem razdoblju cijena nafte će oscilirati između 25 USD/bbl i 70 USD/bbl, u raštućem trendu. Dugoročno, cijena nafte će biti usmjerena prema 150 USD/bbl.

Može se očekivati da će ponuda nafte na svjetskom tržištu do 2020. godine moći zadovoljiti potražnju. Zalihe i iscrpljivanje pličih i jeftinijih izvora nafte, očekuje se, još uvjek neće značajnije utjecati na razinu postojećih marginalnih troškova proizvodnje. Stoga se ne očekuje niti rast minimalne razine cijena nafte do 2020. godine.

Ocjene kretanja cijena prirodnog plina su ostale u sjeni ocjena kretanja cijena nafte, upravo zbog

After the bottom of the crisis has been reached and the economic recovery has started, the recovery of oil prices will ensue. In the short-term, oil prices might grow up to the level of 50 USD/bbl, that is, to approximately 50 USD/bbl in the middle term.

After the crisis ends, a revival of prices trade and further oil price growth will ensue again all up to the former levels.

Following the cyclicity of the development of the American economy, a peak of the economic prosperity can be expected around 2017.

5 CONCLUSION

The price of oil has always been, and will remain, a loyal companion of the events in the world economy. Moreover, it will remain one of the best indicators of the soundness of world economy, especially American as it is the leading economy both according to size, and to the level of development.

In the shorter upcoming period, price of oil will oscillate between 25 USD/bbl and 70 USD/bbl with an upward trend. In the long-term, the price of oil will move towards 150 USD/bbl.

Oil offer on the world market until 2020 can be expected to successfully meet the demand. Reserves and exploitation of more shallow and cheaper oil sources are not expected to impact significantly the level of existing marginal production costs yet. Therefore, growth of the minimum oil price levels is not expected either until 2020.

toga, jer su cijene prirodnog plina pri međunarodnoj trgovini i razmjeni izravno zavisne o cijenama nafte (derivata nafte). Točnije, o cijeni niskosumpornog loživog ulja, kao derivatu nafte.

Cijene energenata, općenito, nužno moraju biti u međusobnoj korelaciji, kako bi se mjerama ekonomskih politika, upravo preko tih cijena, usmjeravaла potrošnja pojedinih energenata, ovisno o ciljevima dane ekonomskih politika. Takve promjene mogu izazvati samo glavni svjetski potrošači i/ili glavni svjetski proizvođači energenata.

Može se očekivati blago jačanje cijena prirodnog plina prema cijenama nafte, zbog djelovanja niza faktora na rast potražnje za prirodnim plinom, idućih godina. Uz već izgrađenu transportnu infrastrukturu (plinovode), brojnost potrošača i veličinu potrošnje, dalnjem širenju potrošnje pogodovat će i sve veći zahtjevi za energetskom racionalnošću, učinkovitošću i ekološkom uvjetovanošću.

Evaluations of fluctuations of natural gas prices remained in the shadow of the evaluations of fluctuations of oil prices exactly because of the fact that natural gas prices in international trade and exchange directly depend on oil prices (oil derivatives prices). In particular, they depend on the price of low-sulphur fuel oil as the oil derivative. Prices of energy sources in general need to be interrelated in order to use the measures of economic politics to direct the consumption of those sources, exactly by virtue of those prices, depending on the goals of the given economic politics. Such changes can only be caused by main world consumers and/or main world producers of energy sources.

A slight strengthening of natural gas prices towards oil prices can be expected because of the effect of a number of factors on the growth of demand for natural gas in the following years. Further demand expansion will be favoured by not only the already constructed transport infrastructure (gas pipelines), great numbers of consumers and the extent of consumption, but also by increasing demand for energetic rationality, efficiency and ecological conditions.

LITERATURA / REFERENCES

- [1] Reuters – www.reuters.com
 - [2] Bloomberg – www.bloomberg.com
 - [3] Standard & Poor's – www.standardandpoors.com
-

Adrese autora: Authors' Addresses:

Mr. sc. Nikica Grubišić nikica.grubisic@ina.hr INA – Industrija naftne d.d. Avenija V. Holjevca 10 10000 Zagreb Hrvatska	Nikica Grubišić, MSc nikica.grubisic@ina.hr INA – Oil Industry, plc Avenija V. Holjevca 10 10000 Zagreb Croatia
--	---

Uredništvo primilo rukopis:
2009-01-21

Manuscript received:
2009-01-21

Prihvaćeno:
2009-01-31

Accepted:
2009-01-31