



Trading and Clearing the
Argus Sour Crude Index (“ASCI”)
with ICE

PRODUCT GUIDE



ICE ARGUS SOUR CRUDE INDEX (“ASCI”)

ICE now offers 4 U.S. Gulf-related sour crude products to oil market participants globally, including:

- **Two ICE OTC *Argus Sour Crude Index (“ASCI”)* sour crude differential swaps (on a Calendar Month and Trade Month basis), and**
- **Two ICE *Argus Sour Crude Index (“ASCI”)* Futures (one outright, one differential)**

This guide is intended to provide essential background on the evolution of the U.S. Gulf Coast sour crude market as it relates to *ASCI* index, as well as the instruments ICE has made available for participants in those markets for the purposes of hedging or trading. Additional information on the underlying *ASCI* index component markets are available through the resources highlighted in this guide.

THE ARGUS SOUR CRUDE INDEX (“ASCI”)

According to Argus:

“The Argus Sour Crude Index (“ASCI”) represents the daily value of U.S. Gulf coast medium sour crude, based on physical spot market transactions. The ASCI index primarily serves buyers and sellers of imported crude that need a broader index of U.S. sour crude value for use in long-term contracts.”

The *ASCI* index is a single price for a basket of three crudes – Mars, Southern Green Canyon and Poseidon. Prices are compiled by Argus from their office in Houston. The *ASCI* index is published as a differential to West Texas Intermediate (WTI) crude oil and as a flat price. A document on the Argus website describes the *ASCI* index methodology in detail, and is available at: www.argusmedia.com/methodology. More background on sour grades and their global context is below.

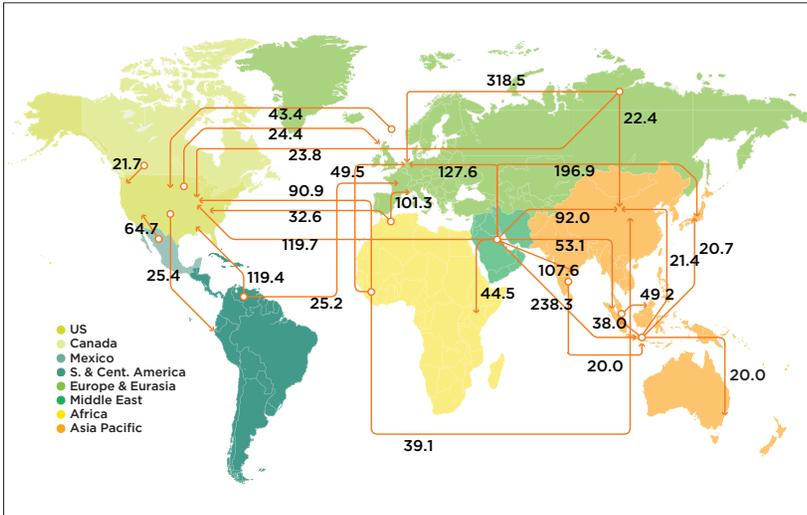
GLOBAL CRUDE PRICING AND BENCHMARKS

There are approximately 550 global crude oil streams that can be identified as individual grades with a multiplicity of qualities and prices. Only a handful of those grades can be called ‘benchmark’ or ‘marker’ grades. The remainder of crude oils price as differentials to those few key benchmarks. With the launch of ICE *ASCI*™ futures, ICE is able to offer *ASCI* index sour crude outright and differential futures alongside the two key global light, sweet crude futures benchmarks – West Texas Intermediate (WTI) and Brent – for the first time. Combined, ICE’s offering allows players to hedge and trade these contracts as outright and as differentials to each other, representing a full spectrum of marker grades relevant to U.S.-based crude pricing.

GLOBAL PRICING, GLOBAL OIL FLOWS

Oil as a commodity is produced, transported, and refined all over the world. Figure 1 illustrates many of these key flows, and their relative size.

FIGURE 1: MAJOR OIL TRADE MOVEMENTS



Source: BP Statistical Review of World Energy 2009

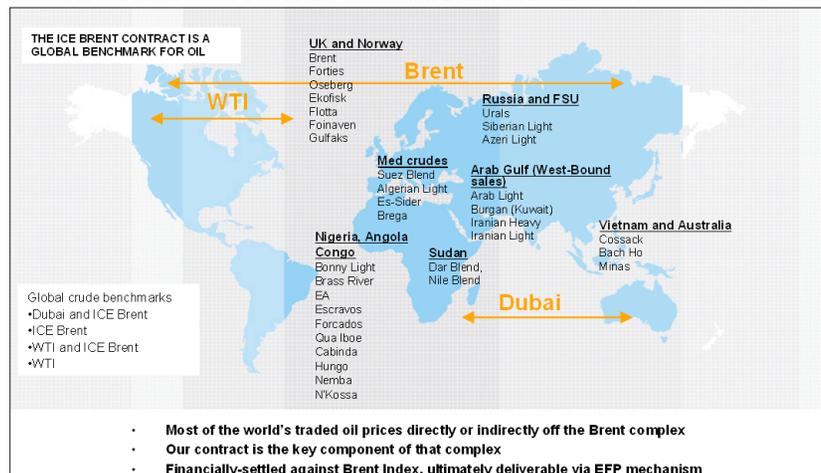
THE WORLD'S TWO LARGEST CRUDE BENCHMARKS ARE SWEET GRADES, BUT THERE'S A GROWING AMOUNT OF SOUR CRUDE TO PRICE

Crude oil can be described in terms of each grade's key characteristics as a hydrocarbon, each of which influences the economic yield of that grade in terms of the refined products that flow from that grade, in addition to where it is located. Terms like 'light', 'sweet' and 'sour' are used. WTI and Brent, the two most important global crude benchmarks are 'light and sweet', whereas most of the world's total crude production, including the ASCI index component grades (such as Mars, Poseidon and Southern Green Canyon, see below) are

more sour and 'heavier' than Brent and WTI, meaning that they are denser and are higher in sulphur by-product, generally making them less valuable in terms of the products produced in the refining operation. However, much of U.S. Gulf refining capacity has become well adapted to processing the heavier, more sour grades, and can thus use sour grades that are produced in the U.S. Gulf or imported from global locales such as the Arab Gulf. As a result, these refiners are able to capture the discounted prices for sour crudes, relative to lighter, sweeter - and more expensive - grades like WTI and Brent.

For more than twenty years, Brent has been the dominant global physical marker crude. West Texas Intermediate, also a light, sweet grade, has been the central price hub for crude oil within North America, although most of the light, sweet crude being imported is also priced using the North-Sea produced Brent grade. Brent prices, by reference, approximately two thirds of all global physical crude oil produced. Figure 2 below outlines various crude markers globally and their price relationship to Brent:

FIGURE 2: THE BRENT CRUDE FUTURES CONTRACT: BRENT RELATED PRICING WORLDWIDE



THE U.S. GULF SOUR CRUDE MARKET

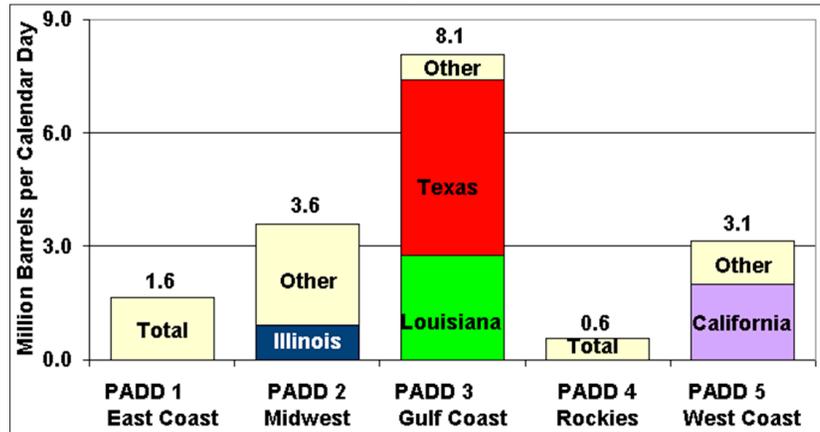
The U.S. Gulf is a key region for the U.S. oil industry, providing at least one-third of U.S. domestic oil production, and containing around half of U.S. refining capacity (see Figure 3 below). It is logical that U.S. pricing should overlay its key infrastructure. The ASCI index - and pricing against it - represents such an alignment.

U.S. sour crude production has risen sharply over the past few years, boosting interest in a U.S. Gulf Coast Sour Crude Index. The increase in oil production in the U.S. Gulf more specifically has led to a surge in spot market trading volumes. U.S. Gulf output of about 1.2 million b/d in 2009 is expected to climb to 1.4 million b/d in 2010 and 1.9 million b/d in 2013.

According to the U.S. Department of Energy, around 7.5 million b/d of crude oil originating from countries with predominantly sour crude production were imported in 2008 (see Figure 4 below). This represents close to 75%

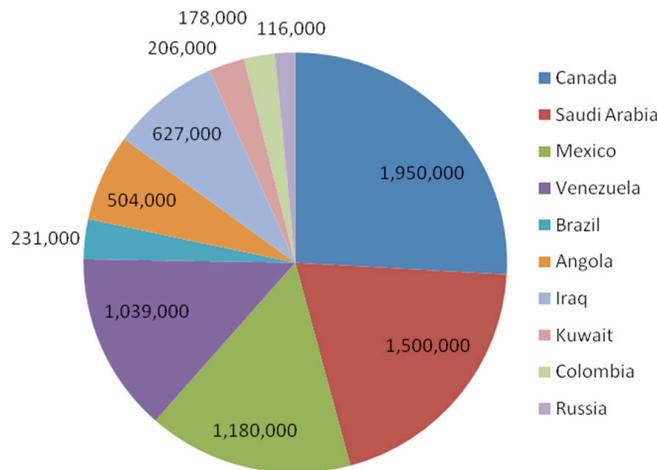
of the total average daily U.S. crude imports of approximately 9.7 million b/d (2008). Many of the refiners located in the U.S. Gulf Coast region have a high degree of upgrading and processing capacity and therefore are specialists in refining sour crude oil. U.S. Gulf Coast refiners have also increasingly invested in coking facilities which break down residual oils into lighter and lower sulphur products.

FIGURE 3: U.S. PETROLEUM REFINERY CAPACITY, BY REGION CRUDE OIL DISTILLATION



Source: Petroleum Supply Annual, Table 36, Biennial Refinery Report

FIGURE 4: U.S. GULF SOUR CRUDE IMPORTS BY COUNTRY AND VOLUME



Source: U.S. Department of Energy

WTI PRICE DISCONNECTION VERSUS OTHER DOMESTIC SWEET AND SOUR CRUDES AND BRENT - THE FEBRUARY 2009 DISRUPTION & PRICING ISSUES FOR THE INDUSTRY

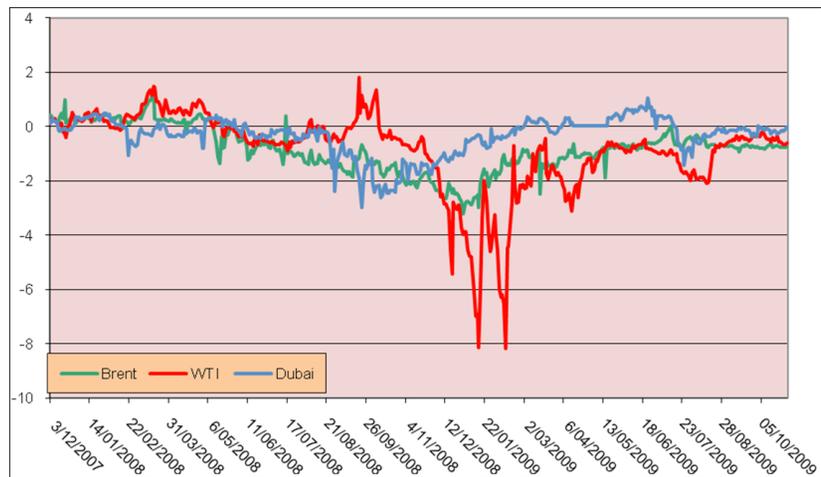
In addition to a greater reliance on U.S. Gulf Coast sour crude, the existing predominant U.S. benchmark - WTI - has experienced significant dislocation from other major global oil markers over the past several years (see Figure 5). Industry participants increasingly express concerns over WTI's physical infrastructure, its delivery and flow constraints, and major storage location in Cushing, Oklahoma.

In part, as a result of these factors, in November 2009, Saudi Aramco announced plans to stop pricing its output relative to WTI and begin pricing relative to the ASCI index for January 2010 crude imports to the U.S. Gulf. Much of the momentum for the Saudi announcement and industry disquiet stemmed from the dislocation of WTI prices from both U.S. domestic and other international marker grades in 2008 and repeated most dramatically in February 2009.

So what happened early in 2009? Following are some of the points raised by industry commentators:

- The Cushing delivery location for WTI is a pipeline nexus, with no proximity to U.S. Gulf refiners
- A self-feeding 'reinforcing feedback' of local storage built up, doubling between December '08 and March '09 (Adding 30+ mil/bbl) to exploit contango price arbitrage available in the market
- This was allied to a de facto one-way 'lock-in' effect of pipeline inland flow north out of the U.S. Gulf to Cushing and towards the Chicago-based refineries – creating a 'cash & carry' arbitrage supply loop as U.S. Gulf – Cushing effectively became disconnected, even within the United States, in price terms
- Early 2009 saw extreme volatility of WTI front monthly spreads, pulling first line flat prices down
- The depth of contango overall and the allied instability of term structure became widely problematic for many market participants
- Collectively, these factors led to WTI decoupling from other U.S. & international crude grades, with Mars (effectively close to the ASCI index number) \$3/bbl above, rather than below WTI. Louisiana Light Sweet (LLS), a comparable light sweet crude located in the U.S. Gulf, was as much as \$9.90/bbl above WTI, and a \$11.56/bbl positive differential for Brent was seen, compared to the more normal \$1.00-\$1.50/bbl negative differential

FIGURE 5: BENCHMARK CORRELATION IN 2008/2009: WTI DIVERGENCE FROM BRENT AND DUBAI (First monthly spread)



While WTI remains the underlying reference base for ASCI index related sour crude differentials, a possibility exists that the outright ASCI index price may become more independent of its WTI base, especially if the differentials to WTI continue to be less stable than the differentials to more globally-traded markers such as Brent.

WHY DOES THE SAUDI PRICING CHANGE MATTER TO THE U.S. OIL MARKETS?

Saudi (generally sour) crude oil forms a large part of the total crude imported into the United States (see imported proportions in Figure 4 above). Together with the price of WTI (as long as sour crudes continue to be priced in this way), differentials will continue to be an important part of the overall price of crude oil, ultimately affecting the price products such as heating oil and gasoline for the U.S. consumer.

Other Arab Gulf producers regard Saudi Arabia as the key bellwether for OPEC decisions, and frequently fall into line behind Saudi decisions and practice. Saudi Arabia's break with WTI pricing reinforces the views of some that using sour crude contracts for pricing sour into the United States is a better mechanism than using WTI futures, whatever the latter's liquidity, especially given WTI's recent dislocations.

This change will likely have knock-on effects for pricing by the very influential Arab Gulf producers, and for the treatment of other sour crudes such as Urals and Dubai. It may also contribute to Brent becoming even more dominant in global (light sweet) physical pricing, as WTI's status in the U.S. is bifurcated by an increasingly independent ASCI index marker. It is likely that OPEC production will increase in the future, as will Canadian heavy output, especially from unconventional sources such as from oil shale and oil sands, likely rendering sour crudes an even more important component of the global crude market. The ASCI index will give importers an identifiable and independent marker for differentials when setting their Official Selling Prices (OSPs), and

reduce the need for ad hoc proxy calculations between importers and their customers when WTI fundamentals dislocate.

WHAT IS AN OSP?

OSP stands for Official Selling Price and is the mechanism that the majority of the Middle Eastern producers use to sell their crude oil. This is generally set on a monthly basis and the producer will use a variety of similar crude price references to calculate the OSP. In the case of the Saudis, they will generally use the prices of Mars, Venezuelan and Iraqi Basrah Light as a guide for setting the OSP.

THE ASCI INDEX SOLUTION

Given the growing criticism of WTI as a ‘broken’ benchmark, and the need for both suppliers and customers to negotiate pricing differentials to WTI, participants have been looking for alternative U.S. benchmarks. As a result, the Argus index, was created to provide a potential alternative for establishing such differentials (Figure 6).

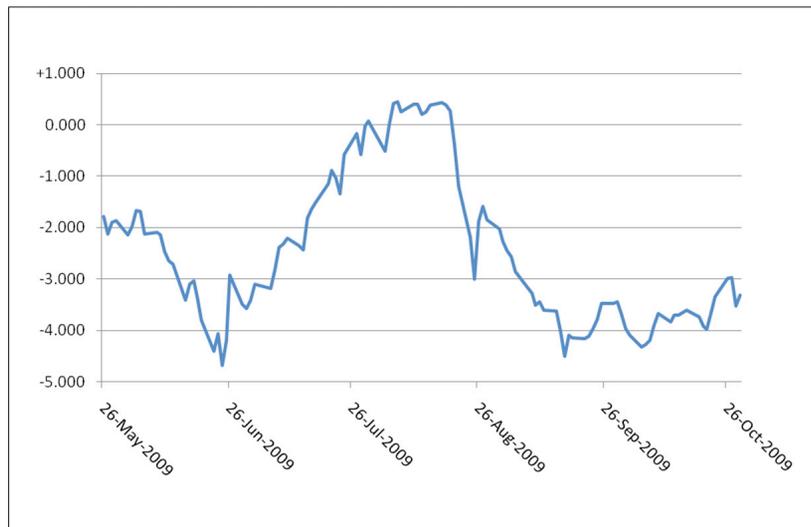
1. What is the ASCI index?

The *ASCI* index is a single price for a basket of three crudes – Mars, Southern Green Canyon and Poseidon. Prices are compiled by Argus from their office in Houston. The *ASCI* index is published as a differential to WTI and as a flat price.

2. How is the ASCI index calculated?

The *Argus Sour Crude Index (“ASCI”)* is a trade weighted index using trades in the underlying three grades – Mars, Southern Green Canyon and Poseidon. The WTI component, to which the differential is added, is assessed at 14:30 EST. The differentials continue to be assessed up to and including 16:00 EST with the final price published by 18:00 EST.

FIGURE 6: HISTORICAL PRICING DATA FOR ASCI VERSUS WTI AS A DIFFERENTIAL



Source: Argus

ASCI INDEX COMPONENT SOUR CRUDE GRADES

Three physical grades are used in the compilation of the *Argus Sour Crude Index (“ASCI”)*. This helps to enhance its robustness for deriving an effective settlement price on which to base a futures [or over-the-counter swaps] market. The three grades, Mars, Poseidon and Southern Green Canyon have a combined daily production of close to 1 million b/d with spot trade regularly exceeding 50% of the total daily production, according to Argus. The Argus Sour Crude spot market trade is 7 times larger than the equivalent for Dubai and almost double the size of both Urals markets combined (Source: Argus *ASCI* White Paper).

- Mars:** Mars is the crude stream with the highest volume of the three grades, producing around 350,000 b/d in September 2009 according to the field operator website www.marscrude.com. The blend primarily comes from the Mars field, which is operated by Shell with BP as a minority partner. The other field in the system is called Ursa and is also operated by Shell with BP, ExxonMobil and Conoco as minority partners. The Mars field, which lies in the Gulf of Mexico about 130 miles southeast of New Orleans, is connected via the Equilon-operated pipeline to the Clovelly storage facility that is part of the Louisiana Offshore Oil Port (LOOP).

- **Southern Green Canyon:** Daily volumes are estimated to be around 230,000 b/d with the largest share coming from the Atlantis field, according to the website www.cameronhighwayoil.com). The Atlantis field is operated by BP with BHP Billiton as a significant equity holder. The other fields in the system include Holstein and Mad Dog (100,000 b/d). Output from the Atlantis, Holstein and Mad Dog fields is shipped via the Cesar Oil pipeline, operated by the Mardi Gras Transportation system, to the Cameron Highway Offshore Oil Pipeline system which will transport the oil to the Gulf Coast refineries.
- **Poseidon:** Production currently stands at about 225,000 b/d. Like the Mars and Southern Green Canyon fields, Poseidon is a pipeline network. Enterprise Products Partners have a 36% share, as do Shell Pipeline Company. Marathon has a 28% stake in the field.

WHAT TYPE OF PRICING IS RELEVANT TO AND CAPTURED BY THE ASCI INDEX, AND WHAT TYPE OF TRANSACTIONS ARE LIKELY IN ASCI INDEX RELATED PRODUCTS?

It is likely that market participants may trade and hedge around the 5 or 10 day pricing and trading windows for monthly OSP-related Arab Gulf, imported cargoes into the U.S. Gulf for dates around the 25th-30th of each month or between the 25th and the 5th of the following month in calendar terms. (These represent the first 5 or 10 days of a trade month, by which the physical nominations to move landed crude by inland pipeline are organized).

It is possible that increasingly flexible contract terms may become more common as importers and refiners use more monthly average pattern contracts (popular elsewhere in oil markets), which will appeal to many refiners, as it reduces price volatility and increases logistical and price options. If other Arab Gulf countries such as Kuwait, and more openly-traded Iraqi grades follow suit, interest will increase further in ASCI index outright and differentially-traded pricing.

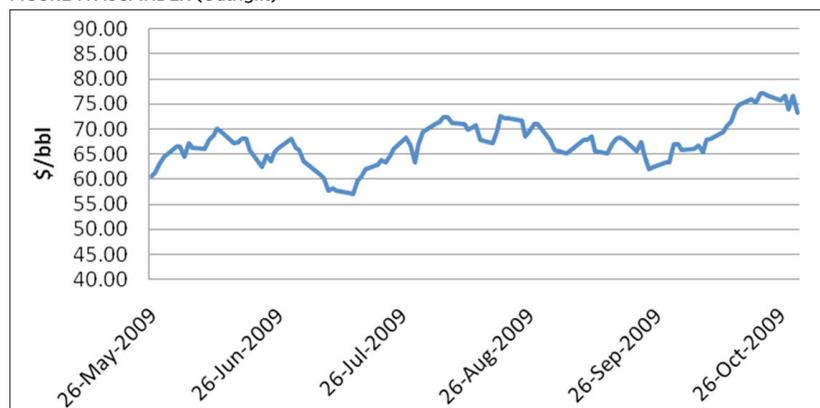
Inter-month spreads in either OTC markets or futures differential and outright contracts will allow hedgers to move their price exposure along the timing curve as their physical requirements change. These contracts will also enable traders to take a view on price evolution in relative domestic sweet/sour differentials at different points along the forward price curve, and also in relation to such global sweet markers as Brent.

Trading against the outright future or differential can also allow market participants to take a view on outright sour crude prices in a key production, refining and import region of the United States, and a sweet/sour differential which marks one of the major global spreads of its type. Sweet/sour spreads represent a play on the input costs of simple against complex refining, and of the likely output levels of OPEC heavier, more sour crudes against other sections of global crude output. In short, many key refining and production margins are available through such instruments and related WTI and Brent products.

TRADING IN ICE ARGUS SOUR CRUDE INDEX ("ASCI") FUTURES AND OTC SWAPS

1. **Outright:** The ICE *Argus Sour Crude Index* ("ASCI") future allows market participants to hedge or trade around the outright flat price of a representative basket of U.S. Gulf sour crudes. Participants will be able to match the exposure of U.S. Gulf-produced or U.S. Gulf-delivered sour crudes with a single instrument (Figure 7).
2. **Inter-commodity spreading:** The ICE

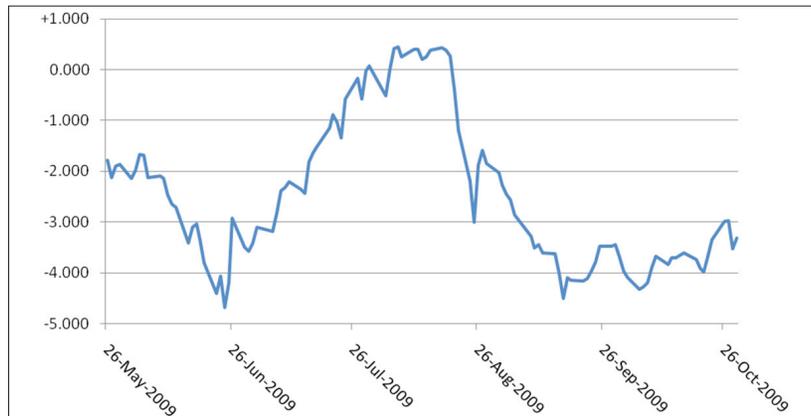
FIGURE 7: ASCI INDEX (Outright)



Source: Argus

Argus Sour Crude Index ("ASCI") Differential Future and *ASCI* Index Differential OTC Swaps represent a first order inter-commodity quality spread, a direct spread between U.S. Gulf sour crude prices and Mid-continent WTI light sweet crude prices (see Figure 8 below). These can be traded on ICE in an OTC swap form as differentials over a calendar month period, or as trade months, with the 'bullet' differential future providing such pricing and trading facility in a futures environment.

FIGURE 8: ARGUS SOUR CRUDE INDEX vs WTI



in price terms, which can be affected by:

- global fundamental factors in oil, the overall economic outlook,
- the proportion of OPEC (sourer) crudes within the overall crude production picture,
- the relative demand for light-end against middle-distillate products,
- the quantity of oil in storage, and
- the relative fundamentals of the U.S. Gulf against Mid-continental conditions, among others, at different points in time.

WHAT ARE THE IMPLICATIONS OF THESE CHANGES FOR THE BRENT MARKET?

As third-party commentators have said, the *ASCI* index does not offer a threat to ICE Brent as the leading global physical light, sweet crude marker price. Although Brent is a light, sweet crude, unlike WTI, Brent has a number of factors that differentiate it from WTI to make it a uniquely successful global benchmark:

Brent is a seaborne, globally traded and referenced physical crude. Because WTI cannot be traded and transported outside of the United States, WTI cannot truly reflect global underlying physical fundamentals as efficiently.

Additional jurisdictions, such as Australia, are increasingly using Brent as a pricing reference, particularly in Asia.

Physical Brent is closer to the *ASCI* index component grades in specification than WTI, and as a stream has become more sour as the Buzzard field has been added to Forties, forming part of the wider Brent complex.

ICE Brent already trades on a differential basis to Dubai, the most popular sour crude marker in Asia, and there is every reason to expect *ASCI* index instruments to also trade and price in reference to ICE Brent in a similar manner. The two sweet/sour differentials: ICE Brent/Dubai and ICE Brent/*ASCI* index may well compete to be the dominant global sweet/sour differential, as they represent key pricing 'bridges' globally.

The following charts (Figure 9 and Figure 10), together with Figure 5 above, demonstrate that Brent's pricing behavior has

3. The ICE *Argus Sour Crude Index ("ASCI")* Future versus ICE Brent Future as a flat price against a flat price will also represent an additional global sweet/sour differential to be traded in any single maturity, or via boxes to be traded or hedged against ICE Brent across any chosen part of these two crude benchmarks' respective forward curves.

4. Intermonth spreading: ICE *Argus Sour Crude Index ("ASCI")* intermonth spreads in the ICE *Argus Sour Crude Index ("ASCI")* Differential Future will enable participants to trade around their forward view of how this important sweet/sour differential will evolve

remained within expected norms against key global references, while WTI has periodically disconnected. Figures 9 and 10 also show Brent's relative price stability, and price 'bridge' status between WTI and the U.S. Gulf sour crudes. Arguably ship borne Brent is often more closely correlated with U.S. Gulf sour crudes than their U.S. light sweet equivalent, WTI, which is of relevance when an increasing proportion of the sour crude volume is being priced in terms of ship borne, imported, and hence internationally-traded crude.

FIGURE 9: ASCI/ INDEX CORRELATIONS - BRENT, WTI & WTI (Mars as Proxy)

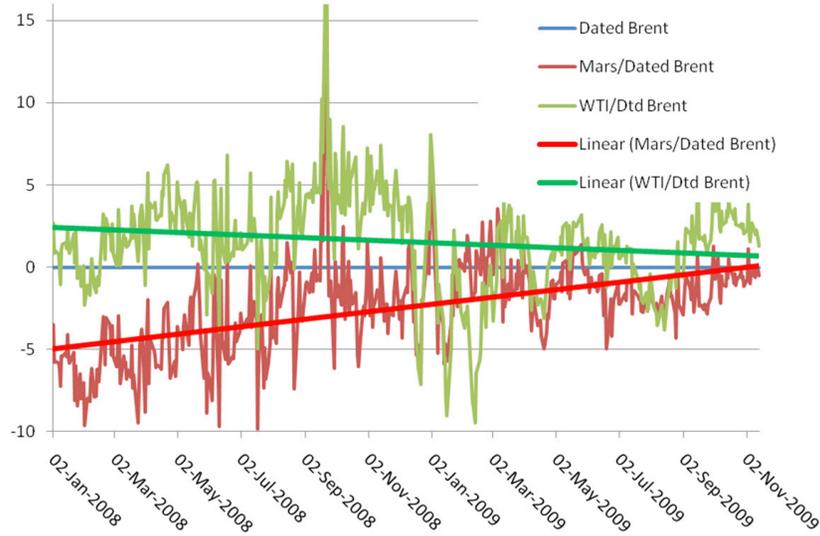
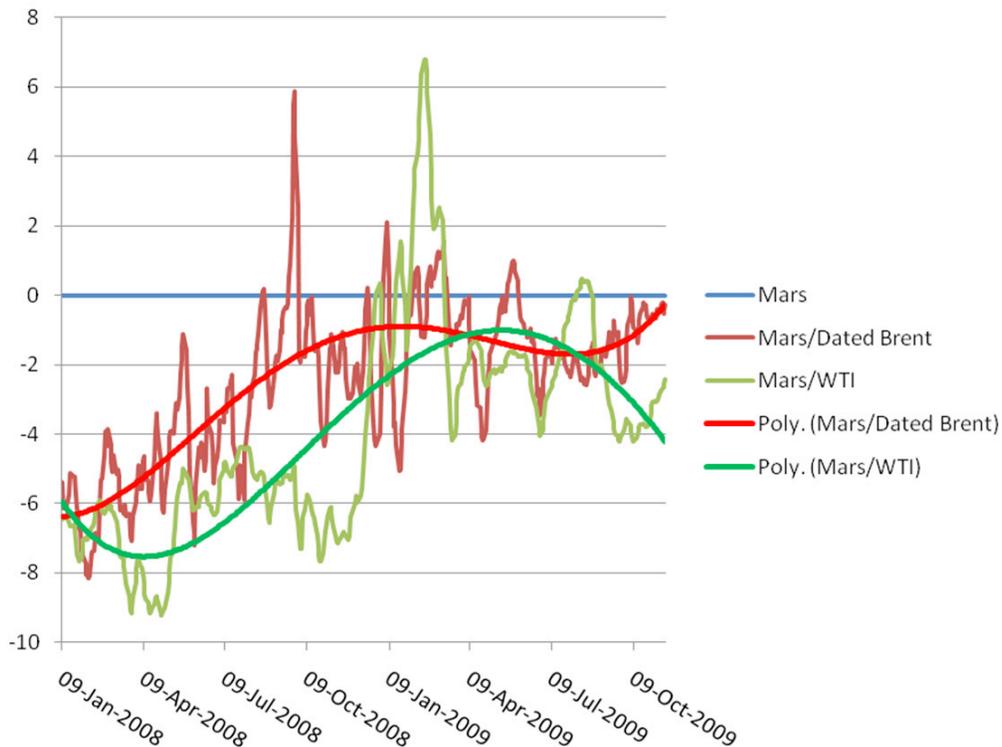


FIGURE 10: ASCI/ INDEX CORRELATIONS - BRENT, WTI & WTI (5-day av. prices and trend)



SUMMARY

THE ICE ARGUS SOUR CRUDE INDEX (“ASCI”) PRODUCT RANGE

- ICE *Argus Sour Crude Index* (“ASCI”) Futures Contract Specifications
<https://www.theice.com/productguide/ProductDetails.shtml?specId=1428>
- ICE *Argus Sour Crude Index* (“ASCI”) Differential Futures Contract Specifications
<https://www.theice.com/productguide/ProductDetails.shtml?specId=1430>
- ICE *Argus Sour Crude Index* (“ASCI”) Differential Trade Month Swap Specifications
<https://www.theice.com/productguide/ProductDetails.shtml?specId=1427>
- ICE *Argus Sour Crude Index* (“ASCI”) Differential Calendar Month Swap Specifications
<https://www.theice.com/productguide/ProductDetails.shtml?specId=1426>

ICE ARGUS SOUR CRUDE INDEX (“ASCI”) FUTURES AND DIFFERENTIAL FUTURES

ICE launched the ICE *Argus Sour Crude Index* (“ASCI”) Futures Contracts to:

- Create a liquid sour crude benchmark to compliment its existing ICE Brent and ICE WTI Futures contracts. This will provide participants with the opportunity to access some of the most liquid global oil grades in a single electronic marketplace;
- Facilitate trading in the *ASCI* index/Brent and *ASCI* index/WTI Futures spreads;
- Provide market participants margin offsets where possible between the ICE Brent Crude Futures contract, the ICE WTI Crude Futures contract and the ICE *Argus Sour Crude Index* (“ASCI”) Futures contract; and
- Allow market participants to manage exposure to either the differential to WTI or the flat price.

Only ICE can offer both *ASCI* index futures (outright and differential) alongside WTI and Brent futures via a single electronic platform. The four futures combined allow multiple trading and hedging opportunities in the three key grades of crude oil, as well as spreading across grades and time periods.

Details of each of the ICE *Argus Sour Crude Index* (“ASCI”) products are available via the following links:

ICE *Argus Sour Crude Index* (“ASCI”) Differential OTC Swaps

In addition to the two ICE *Argus Sour Crude Index* (“ASCI”) futures, ICE also offer cleared differential swaps against the *ASCI* index differential (to WTI) in both calendar month and trade month tenors.

These allow trades and hedgers of *ASCI* index related sour crudes to:

- Hedge and trade around *ASCI* index related differentials in either calendar month or trade month pattern;
- Match current or future physical contract terms as they see fit;
- Utilize logical margin offsets against other relevant OTC markets such as WTI first-line swaps, Brent and Brent/Dubai instruments to maximize capital efficiency

ICE Clearing

Summary of ICE OTC Cleared Oil and other energy products:

- ICE offers over 100 cleared OTC oil products across all major global crudes and refined products in both outright form and as differentials. Please use the following link to reach a full list of ICE cleared OTC oil products

[More ICE Crude Oil and Refined Products](#)

ICE OTC CLEARING: WHY AND HOW?**Elimination of Counterparty Risk**

- OTC clearing virtually eliminates counterparty risk associated with traditional bilateral trades. The clearing house acts as a central counterparty for all trades. Clearing gives market participants the security of futures transactions with the flexibility of OTC markets
- Margining removes the daily rigor of back office processes associated with bilateral trades via letters of credit. It outsources collateralization to a guaranteed and financially secure third party
- By carrying both sides of the transaction, the systemic risk is naturally diversified, while conservative volatility-based margining provided by the clearing house creates security for all involved

Increased trading opportunities

- Deferring to cleared business eliminates operational distractions and complexity related to bilateral credit issues around trading and hedging
- Participants benefit from the fact that OTC trades are centrally cleared, freeing the use of bilateral credit lines - opening up a larger and broader universe of market participants, including those who might otherwise be excluded

Efficient capital flows

- Clearing satisfies increasingly rigorous capital requirements placed upon market participants by regulators and policymakers
- A trader who has reached his own desk limits in capital terms, but who sees a promising trading opportunity, can add additional exposure with no further credit exposure, if the marginal OTC position is sent for clearing, rather than added to a bank's or trading firm's own net credit position

Streamlining back office operations

- Offsets between exchange-traded and bilateral OTC instruments to a single clearing house allow reduced capital reserve requirements and margin, reduced confirmation errors, and other back office bottlenecks
- Clearing provides settlement values, aiding price discovery and risk monitoring via objective fair-value mark-to-market for OTC markets
- The posting of initial and variation margin through clearing houses ensures a degree of security of performance and payment that cannot be matched by even the most highly secure single counterparties in the bilateral OTC trading realm

WHY CLEAR WITH ICE?**Global market synergies**

- If a customer is trading ICE oil futures such as Brent, WTI and Gasoil, it makes sense to also clear strongly correlated instruments offering related OTC bilateral exposure to such global benchmarks through the same clearing house and thus get the benefit of direct cross-margining and offsets across screen-traded and bilateral markets, for the most efficient and operationally simple employment of capital in trading and hedging energy
- Companies actively trading the energy complex across diverse derivative products in Brent, WTI, Gas[oil] and Emissions will significantly benefit from related efficiencies across trade capture, confirmation, margining and reconciliation

State-of-the-art cross-margining optimizes capital efficiency

- Margin offsets between screen-traded futures and bilaterally matched OTC markets of up to 95% are available to ICE Clear customers in markets such as oil inter-commodity spreads
- Back office processes are simplified and reconciliations easier to process via a single clearing house that handles ICE on-screen execution and clearing of related OTC instruments

Rational margins

- ICE’s settlement curves used for margining such bilateral instruments are independently and directly sourced from a pool of established major trading entities, and considered highly reliable for margining purposes establishing true fair value

CONCLUSION

The decision to switch pricing to the *ASCI* index by such a significant U.S. Gulf importer likely marks a period of increasing reflection and uncertainty for U.S. domestic crude pricing, especially of sour crudes of the type that comprise the *ASCI* index. WTI remains the major U.S. domestic light sweet benchmark, and a key underpinning of the *ASCI* index. Brent continues to grow in significance as the most common international physical crude benchmark, and is continuing to enhance its significance in pricing.

The *ICE Argus Sour Crude Index (“ASCI”)* product offering allows traders and hedgers in any and all of these markets to access all, and intervening spreads and differentials at a single point of delivery, and to maximize clearing, processing and capital efficiencies through one provider.

For more information please contact:**US: Jeff Barbuto**

+1 646 733 5014

Jeff.Barbuto@theice.com**Europe: Paul Wightman**

+44 (0)20 7065 7744

Paul.Wightman@theice.com**Asia: Jennifer Ilkiw**

+65 6594 0161

Jennifer.Ilkiw@theice.com**US: Yvonne Betts**

+1 713.890.1224

Yvonne.Betts@theice.com**Europe: Deborah Pratt**

+44 (0)20 7065 7734

Deborah.Pratt@theice.com**Asia: Julius Foo**

+65 6594 0162

Julius.Foo@theice.com

ABOUT ICE

IntercontinentalExchange® (NYSE: ICE) operates leading regulated exchanges, trading platforms and clearing houses serving the global markets for agricultural, credit, currency, emissions, energy and equity index markets. ICE Futures Europe® hosts trade in half of the world's crude and refined oil futures. ICE Futures U.S.® and ICE Futures Canada® list agricultural, currency and Russell Index markets. ICE® offers trade execution and processing for the credit derivatives markets through Creditex® and ICE Link™, respectively, and CDS clearing through ICE Trust™. A component of the Russell 1000® and S&P 500 indexes, ICE serves customers in more than 50 countries and is headquartered in Atlanta, with offices in New York, London, Chicago, Winnipeg, Calgary, Houston and Singapore. www.theice.com

LEADING ELECTRONIC TRADING PLATFORM

ICE's electronic trading platform provides rapid trade execution and is one of the world's most flexible, efficient and secure commodities trading systems. Accessible via direct connections, telecom hubs, the Internet or through a number of front-end providers, today, ICE offers a 3 millisecond transaction time in its futures markets – the fastest in the industry. ICE's platform is scalable and flexible – which means new products and functionality can be added without market disruption. ICE offers numerous APIs for accessing futures and OTC markets, including a FIX API.

INTEGRATED ACCESS TO GLOBAL DERIVATIVES MARKETS

ICE's integrated marketplace offers futures and OTC, cleared and bilateral products on a widely-distributed electronic platform that provides quick response times to participants' needs, the changing market conditions and evolving market trends.

TRANSPARENCY

Price transparency is vital to efficient and equitable markets. ICE offers unprecedented price transparency and ensures that full depth of market is shown. Trades are executed on a first-in/first-out basis, ensuring fair execution priority. ICE also displays a live ticker of all deal terms and maintains an electronic file of all transactions conducted in its markets.

ICE FUTURES EUROPE REGULATION vs ICE FUTURES U.S.

ICE Futures Europe is a Recognised Investment Exchange in the UK, supervised by the Financial Services Authority under the terms of the Financial Services and Markets Act 2000. As a consequence, the ICE platform supports an orderly, regulated futures market thanks to its wide availability, open participation and complete documentation of all orders. ICE operates its sales and marketing activities in the UK through ICE Markets which is authorized and regulated by the Financial Services Authority as an arranger of deals in investments and agency broker.

ICE OTC REGULATION

ICE operates its OTC electronic platform as an exempt commercial market under the Commodity Exchange Act and regulations of the Commodity Futures Trading Commission, (CFTC). The CFTC generally oversees the trading of OTC derivative contracts on the ICE platform. All ICE participants must qualify as eligible commercial entities, as defined by the Commodity Exchange Act, and each participant must trade for its own account, as a principal.

As an exempt commercial market, ICE is required to comply with the access, reporting and record-keeping requirements of the CFTC. ICE's OTC business is not otherwise subject to substantive regulation by the CFTC or other U.S. regulatory authorities. Both the CFTC and the Federal Energy Regulatory Commission have view-only access to the ICE trading screens on a real-time basis.

GETTING INVOLVED

To learn more about ICE markets, products, and services, view a list of ICE Education programs or download a copy of the ICE capabilities brochure. To contact ICE, choose from a complete list of ICE contacts or call ICE Futures Europe.

A complete list of specifications is available at: <https://www.theice.com/productguide/productDetails.action?specId=909>

web theice.com | telephone +44 (0)20 7065 7700

This brochure serves as an overview of the Brent and WTI futures and options markets of ICE Futures Europe. Examples and descriptions are designed to foster a better understanding of the Brent and WTI crude oil futures and options market. The examples and descriptions are not intended to serve as investment advice and cannot be the basis for any claim. While every effort has been made to ensure accuracy of the content, ICE Futures Europe does not guarantee its accuracy, or completeness or that any particular trading result can be achieved. ICE Futures Europe cannot be held liable for errors or omissions in the content of the brochure. Futures and options trading involves risk and is not suitable for everyone. Trading on ICE Futures Europe is governed by specific rules and regulations set forth by the Exchange. These rules are subject to change. For more detailed information and specifications on any of the products traded on ICE Futures Europe, contact ICE Futures Europe or a licensed broker.

IntercontinentalExchange is a Registered Trademark of IntercontinentalExchange, Inc., registered in the European Union and the United States. ICE is a Registered Trademark and Marque Deposee of IntercontinentalExchange, Inc., registered in Canada, the European Union, Singapore and the United States. ICE Futures U.S. and ICE Futures Europe are Registered Trademarks of IntercontinentalExchange, Inc., registered in Singapore and the United States. ICE Clear U.S. is a Registered Trademark of IntercontinentalExchange, Inc., registered in the European Union, Singapore and the United States. Russell 1000 is a Registered Trademark of the Frank Russell Company. U.S. Dollar Index is a Registered Trademark of ICE Futures U.S., Inc., registered in the United States. USDX is a Registered Trademark of ICE Futures U.S., Inc., registered in Japan and the United States.

"Argus", "Argus Sour Crude Index" and "ASCI" are trade marks of Argus Media Limited and are used under license. All intellectual property rights in the Argus indices referred to herein belong to Argus Media. Argus Media accepts no liability to third parties arising from or in connection with any use of the Argus indices.

