METHODOLOGY AND SPECIFICATIONS GUIDE

argusmedia.com

ARGUS SOUR CRUDE INDEX™ (ASCI™)

Contents:

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The most up-to-date *ASCI* methodology is available on www.argusmedia.com

Methodology overview

Methodology rationale

Argus strives to construct methodologies that reflect the way the market trades. Argus aims to produce price assessments which are reliable indicators of commodity market values, free from distortion and representative of spot market values. As a result, the specific currencies, volume units, locations and other particulars of an assessment are determined by industry consensus to facilitate seamless bilateral trade and Argus mirrors these industry conventions.

In the Americas crude markets, Argus typically reflects physical market prices across the entire trading day as a low and high of deals done and in some markets a volume-weighted average of deals done. In illiquid markets and time periods, Argus assesses the range within which crude could have traded by applying a strict process outlined later in this methodology. In some markets, Argus also produces cumulative transaction averages across a month and cumulative daily averages. An entire day price is a reliable indicator of physical market values as it incorporates the broadest possible pool of spot market liquidity and has acceptance from industry. Argus applies crude basis differential transactions to the WTI settlement price to arrive at fixed prices because the futures settlement price is a representative futures price reference. This approach has been endorsed by industry acceptance. See also section “Definition of trading day.”

In order to qualify to set the low or high of the day, deals must meet the minimum volume, delivery, timing, and specification requirements in our methodology, and the deals must be bona fide. With the exception of volume, the same requirements apply to volume-weighted averages.

Definition of trading day

Argus defines the trading day by determining at what times the market can be said to contain a fair number of willing buyers and sellers. Outside of these time boundaries, markets are typically too illiquid to produce representative price indications and deals. These boundaries can vary in different markets, and will be under continuous review to maintain the accuracy of the assessments. The trading day is defined as follows:

US Gulf coast pipeline	7:00am – 3:00pm CST

Argus will announce its publishing schedule in a calendar located at www.argusmedia.com. Argus may not assess prices on certain public holidays even when the exchanges are open, due to anticipated illiquidity in the cash spot markets.

Survey process

Argus price assessments are informed by information received from a wide cross section of market participants, including producers, consumers and intermediaries. Argus reporters engage with the industry by proactively polling participants for market data. Argus will contact and accept market data from all credible market sources including front and back office of market participants and brokers. Argus will also receive market data from electronic trading platforms and directly from the back offices of market participants. Argus will accept market data by telephone, instant messenger, email or other means.

Argus encourages all sources of market data to submit all market data to which they are a party that falls within the Argus stated methodological criteria for the relevant assessment. Argus encourages all sources of market data to submit transaction data from back office functions when and where possible.

Throughout all markets, Argus is constantly seeking to increase the number of companies willing to provide market data. Reporters are mentored and held accountable for expanding their pool of contacts. The number of entities providing market data can vary significantly from day to day based on market conditions. Should the number of entities providing market data repeatedly fall to a level that assessment quality may be affected, supervising editors will review the viability of the assessment.

For certain price assessments identified by local management, should more than 50pc of the market data upon which the assessment is based come from a single entity during any assessment period (defined as the minimum period covered, such as a day for a daily assessment), then the supervising editor will engage in an analysis of the market data with the primary reporter to ensure that the quality and integrity of the assessment has not been affected.

Argus has committed to deliver many of our final published prices to clients by a particular deadline each day. Because compiling and confirming transactions and other market data in advance of this deadline is a lengthy process, price assessment procedures must be concluded well before that deadline. As a result, for the Americas crude markets, Argus has instituted cut-off times for the submission of data by market participants. Argus will review all data received after the cut-off time and will make best efforts to include in the assessment process all verifiable transactions and market data received after the cut-off time but reserves the right to exclude any market data from the process if received after the cut-off time.

Cut-off times

US Gulf coast and midcontinent pipeline	3:00 pm CST

Market data usage

In each market, Argus uses the methodological approach deemed to be the most reliable and representative for that market. Argus will utilize various types of market data in its methodologies, to include:

1. Transactions
2. Bids and offers
3. Other market information, to include spread values between grades, locations, timings, and many other data.

In many markets, the relevant methodology will assign a relatively higher importance to transactions over bids and offers, and a relatively higher importance to bids and offers over other market information. Certain markets however will exist for which such a hierarchy would produce unreliable and non-representative price assessments, and so the methodology must assign a different relative importance in order to ensure the quality and integrity of the price assessment. And even in markets for which the hierarchy normally obtains, certain market situations will at times emerge for which the strict hierarchy would produce non-representative prices, requiring Argus to adapt in order to publish representative prices.

Verification of transaction data

Reporters carefully analyze all data submitted to the price assessment process. This data includes transactions, bids, offers, volumes, counterparties, specifications and any other information that contributes materially to the determination of price. This high level of care applies regardless of the methodology employed. Specific to transactions, bids, and offers, reporters seek to verify the price, the volume, the specifications, location basis, and counterparty. In some transactional average methodologies, reporters also examine the full array of transactions to match counterparties and arrive at a list of unique transactions.

Several tests are applied by reporters in all markets to transactional data to determine if it should be subjected to further scrutiny. If a transaction has been identified as failing such a test, it will receive further scrutiny. For certain price assessments identified by local management, Argus has established internal procedures that involve escalation of inquiry within the source's company and escalating review within Argus management. Should this process determine that a transaction should be excluded from the price assessment process, the supervising editor will initiate approval and, if necessary, documentation procedures.

Primary tests applied by reporters

- Transactions not transacted at arms-length, including deals between related parties or affiliates.
- Transaction prices that deviate significantly from the mean of all transactions submitted for that day.
- Transaction prices that fall outside of the generally observed lows and highs that operated throughout the trading day.
- Transactions that are suspected to be a leg of another transaction or in some way contingent on an unknown transaction.
- Single deal volumes that significantly exceed the typical transaction volume for that market.
- Transaction details that are identified by other market participants as being for any reason potentially anomalous.
- Transaction details that are reported by one counterparty differently than the other counterparty.
- Any transaction details that appear to the reporter to be illogical or to stray from the norms of trading behavior. This could include but is not limited to divergent specifications, unusual delivery location and counterparties not typically seen.
- Transactions that involve the same counterparties, the same price and delivery dates are checked to see that they are separate deals and not one deal duplicated in Argus records.

Secondary tests applied by editors for transactions identified for further scrutiny

Transaction tests

- The impact of linkage of the deal to possible other transactions such as contingent legs, exchanges, options, swaps, or other derivative instruments. This will include a review of transactions in markets that the reporter may not be covering.
- The nature of disagreement between counterparties on transactional details.
- The possibility that a deal is directly linked to an offsetting transaction that is not publicly known, for example a "wash trade" which has the purpose of influencing the published price.
- The impact of non-market factors on price or volume, including distressed delivery, credit issues, scheduling issues, demurrage, or containment.

Source tests

- The credibility of the explanation provided for the outlying nature of the transaction.
- The track record of the source submitting the data. Sources will be deemed more credible if they
  - Regularly provide transaction data with few errors.
  - Provide data by Argus' established deadline.
  - Quickly respond to queries from Argus reporters.
  - Have staff designated to respond to such queries.
- How close the information receipt is to the deadline for information, and the impact of that proximity on the validation process.

Assessment guidelines

When insufficient, inadequate, or no transaction information exists, or when a transaction based methodology will not produce representative prices, Argus reporters will make an assessment of market value by applying intelligent judgment based on a broad array of factual market information. Reporters must use a high degree of care in gathering and validating all market data used in determining price assessments, a degree of care equal to that applying to gathering and validating transactions. The information used to form an assessment could include deals done, bids, offers, tenders, spread trades, exchange trades, fundamental supply and demand information and other inputs.

The assessment process employing judgment is rigorous, replicable, and uses widely accepted valuation metrics. These valuation metrics mirror the process used by physical commodity traders to internally assess value prior to entering the market with a bid or offer. Applying these valuation metrics along with sound judgment significantly narrows the band within which a commodity can be assessed, and greatly increases the accuracy and consistency of the price series. The application of judgment is conducted jointly with the supervising editor, in order to be sure that guidelines below are being followed. Valuation metrics include the following:

Relative value transactions

Frequently transactions occur which instead of being an outright purchase or sale of a single commodity, are instead exchanges of commodities. Such transactions allow reporters to value less liquid markets against more liquid ones and establish a strong basis for the exercise of judgement.

- Exchange one commodity for a different commodity in the same market at a negotiated value.
- Exchange delivery dates for the same commodity at a negotiated value.
- Exchange a commodity in one location for the same commodity at another location at a negotiated value.

Bids and offers

If a sufficient number of bids and offers populate the market, then the highest bid and the lowest offer can be assumed to define the boundaries between which a deal could be transacted.

Comparative metrics

The relative values between compared commodities are readily discussed in the market and can be discovered through dialogue with market participants. These discussions are the precursor to negotiation and conclusion of transactions.

- Comparison to the same commodity in another market center.
- Comparison to a more actively traded but slightly different specification commodity in the same market center.
- Analysis of prices in forward markets for physically deliverable commodity that allow extrapolation of value into the prompt timing for the commodity assessed.
- Comparison to the commodity's primary feedstock or primary derived product(s).
- Comparison to trade in the same commodity but in a different modality (as in barge versus oceangoing vessel) or in a different total volume (as in full cargo load versus partial cargo load).

Throughout this methodology, Argus will explain, in more detail and on a market by market basis, the criteria and procedures that are used to make an assessment of market value by applying intelligent judgment.

Volume minimums and transaction data thresholds

In establishing each methodology, Argus will list specific minimum volume for each assessment. Because of the varying transportation infrastructure found in all commodity markets, Argus typically does not establish thresholds strictly on the basis of a count of transactions, as this could lead to unreliable and non-representative assessments. Instead, minimum volumes are typically established which may apply to each transaction accepted, to the aggregate of transactions, to transactions which set a low or high assessment or to other volumetrically relevant parameters.

For certain price assessments identified by local management, Argus will seek to establish minimum transaction data thresholds and when no such threshold can be established Argus will explain the reasons. These thresholds will often reflect the minimum volumes necessary to produce a transaction-based methodology, but may also establish minimum deal parameters for use by a methodology that is based primarily on judgment.

Should no transaction threshold exist, or should submitted data fall below this methodology's stated transaction data threshold for any reason, Argus will follow the procedures outlined elsewhere in this document regarding the exercise of judgment in the price assessment process.

Transparency and confidentiality

Argus values transparency in energy markets. As a result, we publish lists of deals in our reports that include price, basis, and volume information. The deal tables allow subscribers to cross check and verify the deals against the prices. Argus feels transparency and openness is vital to developing confidence in the price assessment process.

Argus asks for transaction counterparty names from contacts in order to confirm deals and to avoid double-counting in volume-weighted averages. But Argus does not publish counterparty names in the Americas crude markets. Many companies have existing confidentiality agreements with counterparties and can only reveal deals to the press if confidentiality is maintained. Maintaining confidentiality allows Argus to gather more information and create more robust assessments.

Basis differentials and absolute prices

In the Americas crude markets, differentials to futures benchmarks or to secondary benchmarks are the negotiated bids, offers, and transaction values. Argus fixed prices are derived by adding the assessed differentials to the benchmark price.

US pipeline differentials are applied to the WTI Formula Basis in order to derive fixed prices. The WTI Formula Basis is represented as a single outright price and is provided for two months forward. Detailed explanations of the WTI Formula Basis are covered later in this document.

Argus publishes various price types for each commodity. ASCI price types include:

Differential Weighted Average: A value arrived at by multiplying each deal's volume by its differential price, summing the resulting

value for all deals in a grade on a given day, and dividing that final sum by the total volume. Expressed as a differential to a reference price.
Weighted Average: The weighted average "fixed" or "outright" price. Reference price plus differential weighted average.
Delta: The change between today's absolute price and that of the previous trading day.

Swaps and forwards markets

Argus publishes forward assessments for numerous markets. These include forward market contracts that can allow physical delivery and swaps contracts that swap a fixed price for the average of a floating published price. Argus looks at forward swaps to inform physical assessments but places primary emphasis on the physical markets.

Publications and price data

ASCI appears in the daily *Argus Crude* report which includes coverage of markets in Europe, Africa, the Mideast Gulf and Asia-Pacific. The price data is available independent of the text-based report in electronic files that can feed into various databases. These price data are also supplied through various third-party data integrators. The Argus website also provides access to prices, reports and news with various web-based tools. All Argus prices are kept in a historical database and available for purchase. Contact your local Argus office for information.

Corrections to assessments

Argus will on occasion publish corrections to price assessments after the publication date. We will correct errors that arise from clerical mistakes, calculation errors, or a misapplication of our stated methodology. Argus will not retroactively assess markets based on new information learned after the assessments are published. We make our best effort to assess markets based on the information we gather during the trading day assessed.

If transaction information is submitted in error, and the company submitting informs Argus of the error within 24 hours of the original submission, Argus will make best efforts to correct the price data. After 24 hours, Argus will review both the material effect that the correction will have on the price data and the amount of time that has elapsed from the date of the published price data before deciding whether to issue a correction. After 30 days, data submitters are not expected to file corrections to submitted data.

Ethics and compliance

Argus operates according to the best practices in the publishing field, and maintains thorough compliance procedures throughout the firm. We want to be seen as a preferred provider by our subscribers, who are held to equally high standards, while at the same time maintaining our editorial integrity and independence. Argus has a strict ethics policy that applies to all staff. The policy can be found on our website at www.argusmedia.com. Included in this policy are restrictions against staff trading in any energy commodity or energy related stocks, and guidelines for accepting gifts. Argus also has strict policies regarding central archiving of email and instant messenger communication, maintenance and archiving of notes, and archiving of spreadsheets and deal lists used in the price assessment process. Argus publishes prices that report and reflect prevailing levels for open-market arm's length transactions (please see the Argus Global Compliance Policy for a detailed definition of arms length).

Consistency in the assessment process

Argus recognizes the need to have judgment consistently applied by reporters covering separate markets, and by reporters replacing existing reporters in the assessment process. In order to ensure this consistency, Argus has developed a program of training and oversight of reporters. This program includes:

1. A global price reporting manual describing among other things the guidelines for the exercise of judgment.
2. Cross-training of staff between markets to ensure proper holiday and sick leave backup. Editors that float between markets to monitor staff application of best practices.
3. Experienced editors overseeing reporting teams are involved in daily mentoring and assisting in the application of judgment for illiquid markets.
4. Editors are required to sign-off on all price assessments each day, thus ensuring the consistent application of judgment.

Review of methodology

The overriding objective of any methodology is to produce price assessments which are reliable indicators of commodity market values, free from distortion and representative of spot market values. As a result, Argus editors and reporters are regularly examining our methodologies and are in regular dialogue with the industry in order to ensure that the methodologies are representative of the physical market being assessed. This process is integral with reporting on a given market.
In addition to this ongoing review of methodology, Argus conducts reviews of all of its methodologies and methodology documents on at least an annual basis.
Argus market report editors and management will periodically and as merited initiate reviews of market coverage based on a qualitative analysis that includes measurements of liquidity, visibility of market data, consistency of market data, quality of market data and industry usage of the assessments. Report editors will review:

- Appropriateness of the methodology of existing assessments
- Termination of existing assessments
- Initiation of new assessments

The report editor will initiate an informal process to examine viability. This process includes:

- Informal discussions with market participants
- Informal discussions with other stakeholders
- Internal review of market data

Should changes, terminations, or initiations be merited, the report editor will submit an internal proposal to management for review and approval. Should changes or terminations of existing assessments be approved, then formal procedures for external consultation are begun.

Changes to methodology

Formal proposals to change methodologies typically emerge out of the ongoing process of internal and external review of the methodologies. Formal procedures for external consultation regarding material changes to existing methodologies will be initiated with an announcement of the proposed change published in the relevant Argus report. This announcement will include:

- Details on the proposed change and the rationale
- Method for submitting comments with a deadline for submissions
- Notice that all formal comments will be published after the given consultation period unless submitter requests confidentiality

Argus will provide sufficient opportunity for stakeholders to analyze and comment on changes, but will not allow the time needed to follow these procedures to create a situation wherein unrepresentative or false prices are published, markets are disrupted, or market participants are put at unnecessary risk. Argus will engage with industry throughout this process in order to gain acceptance of proposed changes to methodology. Argus cannot however guarantee universal acceptance and will act for the good order of the market and ensure the continued integrity of its price assessments as an overriding objective.

Following the consultation period, Argus management will commence an internal review and decide on the methodology change. This will be followed by an announcement of the decision in the relevant Argus report and include a date for implementation. In addition, publication of stakeholders' formal comments that are not subject to confidentiality and Argus' response to those comments will also take place. These formal comments should be published in a manner described by management but must be available to all market participants and stakeholders.

Updates to methodology

On 30 June 2009, Argus began including SGC deals designated as delivered Texas City, Texas, in addition to deals designated as delivered Nederland, Texas. Prior to this date, deals designated as delivered Texas City were excluded from the ASCI price formation process.

On 27 May 2014, Argus began including Poseidon and SGC deals done versus Mars and LLS. Prior to this date, deals done against Mars or LLS were excluded from the ASCI price formation process. Mars deals done versus LLS are not included in the ASCI price formation.

The Argus Americas Crude methodology is constantly updated and revised. The latest available methodology (which may supersede the one you are reading) is available at www.argusmedia.com.

Revised ASCI methodology

The disconnect between US Gulf coast prices and those in the mid-continent has pushed many companies to value US Gulf coast grades using benchmarks LLS and Mars. As a result, the *Argus* methodology for the *ASCI* price now also includes all deals done for Poseidon and SGC versus Mars or LLS as explained in this document. Prior to 27 May 2014, only trades for Mars, Poseidon and SGC done against WTI were included in the *ASCI* volume-weighted average calculation.

Outright index calculation

The outright *ASCI* index is arrived at by adding the *ASCI* differential index to the Argus WTI Formula Basis (see Argus Americas Crude methodology). The methodology addresses difficulties associated with stream disruptions (see below) caused by weather events, and provides fallback structures based on intelligent assessments (see below).

Differential index calculation

The *ASCI* differential index is a daily volume-weighted average of deals done for the component crude grades as if they were one grade of crude.

The component crude grades are Mars, Poseidon and Southern Green Canyon. Should aggregate trade in the component crude grades not achieve the established volume minimum (see below), the differential price published will default to a proportional assessment (see below).

Deals included in the calculation are those done for prompt month delivery at a differential to the concurrent WTI, Mars or LLS month, for example Mars for November delivery at November WTI -3.00. Another example would be Poseidon for November delivery at November Mars -0.80. That differential would then be added to the November Mars volume-weighted average differential published in Argus Crude to arrive at a differential to November WTI.

For the methodology behind Argus' Mars and LLS volume-weighted average differentials, see Argus Americas Crude methodology [hyperlink].

Examples of excluded deals would be those done at a differential to postings, to a non-concurrent month of the same grade, or to a non-concurrent month of WTI.

Volume minimum

The aggregate volume of trade in the three grades must reach 6,000 barrels per calendar day on a given trade day for the *ASCI* price volume-weighted average to be calculated.

The example below shows a total volume for all three grades combined of 28,733 barrels per calendar day on the trade day of 19 October 2009, and so the volume minimum is met. If the volume minimum is not met, Argus uses a proportional assessment.

Argus reserves the right to adjust the volume minimum without notice should it determine that trading activity in the underlying components may harm the integrity of the index.

ASCI example

Date	Crude	Trade month	Basis	Differential price (*$/bl*)	Volume (*b/d*)	(Price)* (Volume)/ Total volume
19 Oct 09	Mars	Nov	November WTI	-3.80	2,000	-0.2645
19 Oct 09	Mars	Nov	November WTI	-3.75	1,000	-0.1305
19 Oct 09	Mars	Nov	November WTI	-3.75	1,000	-0.1305
19 Oct 09	Mars	Nov	November WTI	-3.75	1,000	-0.1305
19 Oct 09	Mars	Nov	November WTI	-3.75	1,000	-0.1305
19 Oct 09	Mars	Nov	November WTI	-3.75	1,000	-0.1305
19 Oct 09	Mars	Nov	November WTI	-3.75	2,000	-0.2610
19 Oct 09	Mars	Nov	November WTI	-3.75	2,000	-0.2610
19 Oct 09	Mars	Nov	November WTI	-3.75	2,000	-0.2610
19 Oct 09	Mars	Nov	November WTI	-3.70	1,000	-0.1288
19 Oct 09	Mars	Nov	November WTI	-3.70	1,000	-0.1288
19 Oct 09	Mars	Nov	November WTI	-3.70	1,000	-0.1288
19 Oct 09	Mars	Nov	November WTI	-3.70	3,733	-0.4807
19 Oct 09	Poseidon	Nov	November WTI	-3.75	2,000	-0.2610
19 Oct 09	Poseidon	Nov	November WTI	-3.70	1,000	-0.1288
19 Oct 09	Poseidon	Nov	November WTI	-3.60	2,000	-0.2506
19 Oct 09	SGC	Nov	November WTI	-3.85	2,000	-0.2680
19 Oct 09	SGC	Nov	November WTI	-3.85	2,000	-0.2680
Total volume:					28,733	
***ASCI* differential:**						-3.74
November WTI Formula Basis:						79.61
***ASCI* price:**						75.87

Proportional assessment

If the aggregate volume of trade in the three grades falls short of 6,000 barrels per calendar day on the trade day, Argus makes a proportional assessment of the *ASCI* differential index.

The price will be constructed using the individual volume-weighted average prices published in Argus Crude, and assigning a proportionality based on prior trade. At the beginning of every trade quarter, Argus will assign each grade a percentage of the total traded volume in the prior six trade months. Those percentage values will apply for the following three trade months.

Example of proportional assessment calculation:

On the first day of the April trade month, Argus will calculate the spot trade percentages of the total combined volume over the October-March trade months, such as 71pc Mars, 22pc Poseidon, 7pc SGC.

For the April, May and June trade months, should the volume minimum not be reached on any given day, the *ASCI* price will be constructed by using the individual volume-weighted average prices for Mars, Poseidon and SGC using the 71pc, 22pc and 7pc proportionality.

In order to ensure that the proportions for the three grades add up to exactly 100pc after rounding, *Argus* will first round the Poseidon and SGC proportions to whole numbers and then subtract the sum of those percentages from 100 to obtain the Mars proportionality. After consultation with industry and with notice, Argus may adjust the proportions based on substantive shifts in trading activity, and will seek to implement such changes only at the beginning of trade months.

Component grades

Grade	Basis
Mars (Month 1)	fob Clovelly, LA
Poseidon	fob Houma, LA
Southern Green Canyon	fob Nederland or Texas City, TX

For the most up-to-date proportional assessement values, please see Annex I.

Stream disruptions

As a matter of course, when output from a pipeline ceases and the market for that grade becomes illiquid, Argus assesses the situation and decides whether to suspend the daily price or continue with an intelligent assessment. Should output from one of the three pipeline systems be disrupted, and the market for that grade becomes illiquid, Argus will constitute the index from trade in the remaining two grades, subject to the existing volume minimum of 6,000 barrels per calendar day on a given trade day. The proportional assessment provision will be applied in the same proportion, and would rely on Argus' published prices for the component grades whether based on actual trade or intelligent assessment.

Example of *stream disruption*:

> If Mars production is disrupted, *Argus* will create the index using trade in Poseidon and SGC. If that combined trade does not total more than 6,000 b/d, then the index will be based on a *proportional assessment*, such as 71pc Mars (in this case, an *intelligent assessment*), 22pc Poseidon, and 7pc SGC.

If all streams or a combination of streams are so disrupted as to damage the integrity of the index, or any given disruption becomes protracted, Argus will consult with industry to form an alternative index construction, based on other sour grades, import values or intelligent assessments.

WTI formula basis

Please see the Argus Americas Crude methodology.

Timing and roll dates

Please see the Argus Americas Crude methodology.

Publication

The *ASCI* price appears in the *Argus Crude* daily market report. The price data are available electronically as part of the data files associated with that report. The ASCI price is published every day, with the exception of some public holidays. For a list of non-publication dates, see the Argus publishing schedule.

Argus price data codes

Description	PA-code	PA-code Price type
ASCI fixed price	PA0006594	4
ASCI differential	PA0006594	49

Annex I: Proportional assessment values

History of proportional assessment values

Dates inclusive	Mars	Poseidon	SGC
26 May 2009 – 25 November 2009	77%	16%	7%
30 November 2009 – 25 February 2010	69%	18%	13%
26 February 2010 – 25 May 2010	70%	19%	11%
26 May 2010 – 25 August 2010	71%	12%	17%
26 August 2010 – 24 November 2010	72%	10%	18%
29 November 2010 – 25 February 2011	73%	11%	16%
28 February 2011 – 25 May 2011	77%	9%	14%
26 May 2011 – 25 August 2011	81%	7%	12%
26 August 2011 – 23 November 2011	84%	7%	9%
28 November 2011 – 24 February 2012	86%	8%	6%
27 February 2012 – 25 May 2012	87%	9%	4%
29 May 2012 – 24 August 2012	84%	13%	3%
27 August 2012 – 21 November 2012	87%	10%	3%
26 November 2012 – 25 February 2013	91%	5%	4%
26 February 2013 – 24 May 2013	89%	4%	7%
28 May 2013 – 23 August 2013	84%	4%	12%
26 August 2013 – 25 November 2013	83%	2%	15%
26 November 2013 – 25 February 2014	76%	4%	20%
26 February 2014 – 23 May 2014	74%	6%	20%
27 May 2014 – 25 August 2014*	63%	16%	21%
26 August 2014 – 25 November 2014*	63%	17%	20%
26 November 2014 – 25 February 2015*	62%	18%	20%
26 February 2015 – 22 May 2015*	57%	20%	23%
26 May 2015 – 25 August 2015*	57%	20%	23%
26 August 2015 – 25 November 2015*	61%	17%	22%
30 November 2015 – 25 February 2016*	64%	13%	23%
26 February 2016 – 25 May 2016*	68%	11%	21%
26 May 2016 – 25 August 2016*	71%	10%	19%
26 August 2016 – 23 November 2016	74%	10%	16%
28 November 2016 – 24 February 2017	74%	10%	16%
27 February 2017 – 25 May 2017	72%	8%	20%

**ratios calculated using new methodology that includes Mars and LLS-based trades*