

**Fastmarkets Benchmark Administration Oy (FBA)
Fastmarkets FOEX PIX European Pulp Indices Benchmark Statement**

Last updated: February 2024

1. General disclosures	
Benchmark name	Fastmarkets FOEX PIX European pulp indices, in USD. This is a family of two indices as explained further in Section 2 below.
Date of initial publication	11 March 2021
Date of last update	February 2024
ISIN	FI4000243027 FI4000243035
Determination by contributions of input data	The family of benchmarks covered by this statement is determined using contributions of input data from a range of market participants within the pulp market, including producers, traders and industrial consumers.
Qualification of the benchmark	The Fastmarkets FOEX PIX European pulp indices family of benchmarks are commodity benchmarks as per the definition set out in Article 3(1)(23) of Regulation (EU) 2016/1011 (the BMR). Pursuant to Article 19(1), the requirements of Annex II of the BMR, together with Article 10, apply to the family because the underlying assets are commodities, and because the benchmarks in question are not regulated-data benchmarks and are not based on submissions by contributors, the majority of which are supervised entities. The benchmark family does not qualify as a type of benchmark listed under Title III of the BMR.
EU Climate Transition Benchmarks/Paris-aligned benchmarks/ESG objectives ((EU) 2019/2089)	Fastmarkets ¹ provides a wide range of commodity price assessments and indices. These do not include any EU Climate Transition Benchmark, EU Paris-aligned Benchmark or benchmarks that pursue the EU ESG objectives. Accordingly, this family of benchmarks does not pursue ESG objectives and is not an EU Climate Transition Benchmark or EU Paris-aligned benchmark.
Explanation of how the methodology aligns with the target of carbon emission reductions or attains the objectives of the Paris Agreement.	Not applicable
2. Key terms relating to the benchmark or family of benchmarks	
Definition of key terms relating to the benchmark	FOEX is a company name and PIX is our trademark name. FOEX PIX NBSK Northern Bleached Softwood Kraft pulp. BHKP is Bleached Hardwood Kraft pulp. The European market excludes Turkey and Russia.
General description of the market or economic reality	The Fastmarkets FOEX PIX NBSK and BHKP pulp indices are weekly index prices in USD based on actual physical trades of Northern Bleached Softwood Kraft pulp (min 100 tonnes) made of typically pine and Bleached Hardwood Kraft pulp (min 200 tonnes) made of eucalyptus or birch, delivered in Europe. They

¹ See the “About Fastmarkets” section at the end of the statement for information on Fastmarkets.

	<p>represent the gross prices agreed on contract business for pulp used for paper or paperboard production.</p> <p>The indices have a large market coverage and a stable group of data contributors with annually fixed volumes from week to week.</p> <p>The calculation of the indices only includes actual contract-based transactions - no bids, offers or market indications are accepted. The index value is the arithmetic average of the price points included.</p> <p>However, Fastmarkets assigns weighting scales to buyers and sellers of pulp. The weighting among data contributors is determined by an annual quota system that assigns more price points to larger buyers/sellers than to smaller ones. The number of price points assigned to each contributor is scaled by the annual volume of sales or purchases of market pulp in each main index grade (NBSK, BHKP, etc). The weighting is kept constant through the year, and Fastmarkets reviews it every January with each data provider. The weighting scale is publicly available as part of the market methodology and specifications.</p>
<p>Geographical boundaries of the market or economic reality</p>	<p>The Fastmarkets FOEX PIX Pulp European indices cover the physical trade in market pulp delivered in Europe. They cover two grades - NBSK and BHKP.</p> <p>The indices are based on contract-based transactions or other recurring business. They do not include spot transactions, which are in any case less common in the European pulp market. Nor do they include integrated shipments or transactions tied to PIX indices. Prices reflected in the indices are gross prices before customer-specific discounts or rebates. Contributors include producers and end users active in the physical trade of market pulp.</p>
<p>Other relevant information relating to the market or economic reality</p>	<p>Total world market pulp demand was estimated at 64.8 million tonnes in 2022 (26 million softwood pulp, of which NBSK is a part, and 38.8 million Bleached Hardwood Kraft Pulp, BHKP).</p> <p>In 2022, market pulp shipments including both NBSK and BHKP to four major regions (in million tonnes) amounted to: 16.3 to China, 13.0 to Western Europe, 7.9 to North America and 4.0 to Latin America. Western Europe thus represents 20% of total world market pulp demand.</p>
<p>Rationale for adopting the methodology</p>	<p>Fastmarkets FOEX's rationale is to adopt and develop the price discovery process and to produce indices that are a consistent and representative indicator of the market for the trading period they measure, as well as for the change in prices from one week to the next.</p>
<p>3. Potential limitations of the benchmark and the circumstances in which the measurement of the market or economic reality may become unreliable</p>	
<p>Circumstances in which Fastmarkets would lack enough input data to determine the benchmark according to the methodology</p>	<p>The frequency of publication of the FOEX PIX European pulp indices - weekly - was determined after considering the amount of input data that Fastmarkets can reasonably expect to collect on a consistent basis over the selected period to support the price</p>

	<p>assessment process, ensuring that the indices can be determined on each pricing week and are reliable indicators for the physical market they relate to. Fastmarkets' price reporters aim to canvass a broad sample of market participants specifically involved in the buying and selling of the pulp grade of interest, with a good representation of both sides of the market. Pulp producers, buyers, agents and trading houses, including buyers/sellers acting on behalf of another buyer/seller, qualify as data contributors.</p> <p>If contributors submit a single weighted average price, that price point is included in the week's collected price points multiple times, according to the number of price points the contributor is allowed. For instance, if a seller of NBSK is allowed five price points and submits a single weighted average price of \$X in a given week, then \$X is included five times in that week's collected price points.</p> <p>Because commodity markets differ in liquidity at different periods, Fastmarkets typically does not set a minimum number, or threshold, of price points for calculating the indices.</p> <p>However, Fastmarkets has several measures in place to ensure it has enough input data to determine the family of benchmarks. These measures may involve the use of discretion or expert judgement - where this is the case, they will be subject to the controls described in Section 4 below.</p> <p>It can, for instance, decide to include price data received after the collection deadline into the index calculation on a given week.</p> <p>If a data contributor does not report prices in a given week (e.g. a company may not have sales or purchases during that week), Fastmarkets may also use the previous price points received, but only for one additional week.</p> <p>In the unlikely event that there are not enough eligible price points in a given week, and the lack of price points is threatening to distort the index development, Fastmarkets reserves the right to roll forward previous price data beyond the additional week limit mentioned above.</p> <p>Fastmarkets may also state that, because there are an insufficient number of price points, the previous week's index value will be republished. This requires a senior editor's approval, and it would be explained in a pricing rationale.</p> <p>While input for the index is generally evenly split between buyers and sellers, the share can vary from week to week. To eliminate any volatility caused by a shift in the share of the buyer/seller data, Fastmarkets</p>
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	<p>ensures that buyer and seller data each represent 50% of the index.</p> <p>The weighting of any single data contributor's data is limited so that it doesn't dominate the index. No single contributor's data will be weighted so that it contributes more than 25% of the total number of prices included in the index calculation.</p>
<p>Circumstances in which the degree of liquidity of the underlying market becomes insufficient to ensure the integrity and reliability of the benchmark determination</p>	<p>In the unlikely event that there are not enough liquidity and eligible transactions in a given week, and the lack of data points is threatening to distort the index development, Fastmarkets reserves the right to roll forward previous input data beyond the additional week limit mentioned in the methodology. Fastmarkets may also state that because there is an insufficient number of price points, the previous week's index value will be republished. Such use of discretion will be subject to the controls described in Section 4 below.</p>
<p>4. The controls and rules that govern the exercise of judgment or discretion in the calculation of the benchmark or family of benchmarks</p>	
<p>Description of the exercise of judgment or discretion in the calculation of a benchmark</p>	<p>Fastmarkets price reporters are required to adhere to Fastmarkets' Code of Conduct and published methodologies². They are trained to record every step of each pricing session within Fastmarkets' in-house database and pricing system, which enforces strict pricing procedures, peer review checks, security of data, consistency and accountability.</p> <p>The FOEX PIX European pulp indices are based on transaction data only - no bids, offers or indications are accepted in the calculation process.</p> <p>The indices are the arithmetic average of all the price points included in the calculation. The highest and lowest 10% of the number of price points are automatically removed before calculating the PIX index values. This is done to eliminate clerical errors in price reporting and to dampen any possible attempts to manipulate the PIX index value in one direction or the other.</p> <p>Fastmarkets reviews the collected price data to check its consistency with the reporting rules stated in the methodology. If the price data looks questionable, Fastmarkets contacts the contributor to verify the authenticity of the data. If this cannot be achieved, the data may be excluded.</p> <p>Fastmarkets publishes weekly pricing rationales to explain the index calculation. For instance, Fastmarkets details information on the data collected and explains whether any data has been excluded and, if so, why; and whether fallback procedures have been used.</p>
<p>Controls governing the exercise of judgment or discretion</p>	<p>The methodology clearly specifies what input data can and cannot be included in the index calculations. Fastmarkets accepts both separate contract-based transactions prices and single weighted average</p>

² See <https://www.fastmarkets.com/benchmark-admin> for more details.

	<p>prices, but excludes spot transactions, integrated shipments between affiliated parties or indexed-price transactions. If a trading house buys and sells on its own account, those prices are not accepted into the index calculation.</p> <p>Fastmarkets reviews the collected price data to check its consistency with the reporting rules. If the price data looks questionable, Fastmarkets contacts the contributor to verify the authenticity of the data. If this cannot be achieved, the data may be excluded or used only partly. The decision to use only part of the trade(s) is made in concert with a senior price assessor and an explanation for the discarding is provided.</p>
<p>Ex-post evaluation process</p>	<p>All indices are subject to peer review and are signed off by a senior member of Fastmarkets’ editorial teams prior to publication. This peer-review process is in place to make sure that pricing procedures and methodologies are correctly and consistently applied and to ensure integrity and quality of the published prices. Full details of data inputs and calculations are stored in Fastmarkets’ in-house database and pricing system and may be accessed at any time for internal review and auditing purposes. The pricing rationale of each publication describes the weekly index behaviour.</p> <p>Fastmarkets’ compliance team performs ex-post ad-hoc reviews to ensure adherence to the methodologies and the Compliance Manual and reports its findings to FBA and its oversight committee at least on a quarterly basis. Any suspicion of breach of the pricing procedures is investigated and a correction notice is promptly issued to market participants if and when necessary. Any formal complaint related to Fastmarkets’ indices will be investigated pursuant to the published complaints procedure.</p> <p>Fastmarkets’ benchmarks are also subject to an external and independent assurance review once a year for their compliance with the International Organisation of Securities Commissions (IOSCO) Principles for Price Reporting Agencies.</p>
<p>5. Review of the methodology and changes to, or cessation of, the benchmark or family of benchmarks</p>	
<p>Methodology review</p>	<p>Since markets evolve continually, it may become necessary to make changes to a benchmark’s methodology or specifications. Fastmarkets carries out a formal review of its methodologies at least on an annual basis to ensure that they reliably meet industry needs and reflect the physical market under assessment.</p> <p>The process starts with an open consultation that is published on Fastmarkets’ website and sent out to PIX subscribers and data submitters of PIX Pulp Europe indices, when editorial teams may propose changes to the methodology to reflect changed market conditions and invite market participants to share feedback or propose changes.</p>

	<p>At the end of the consultation, the editorial teams review any feedback received and decide whether further consultation is needed or whether a change should be made.</p> <p>Any proposed change to the methodology requires approval by a senior member of Fastmarkets' editorial team and by the Managing Director of FBA. Any material change to the methodology requires approval by the Board of Directors of FBA.</p> <p>The decision is announced via a pricing notice that clearly outlines the rationale for the change, the feedback received (unless stated as confidential) and the timeline for its implementation. Fastmarkets will provide a minimum notice period of 30 days to give stakeholders sufficient opportunity to analyse and comment on the impact of any proposed changes. Methodology review and change consultation process is done according to our policy: https://www.foex.fi/uploads/policies/FM-policies-Methodology-Review-Process.pdf All pricing notices are published and stored here: https://www.foex.fi/index.php?page=pix-methodologies-policies</p>
<p>Changes to or cessation of a benchmark or family of benchmarks</p>	<p>It is possible that factors, including external factors beyond Fastmarkets' control, could necessitate changes to, or - in extremis - the cessation of, a Fastmarkets benchmark or family of benchmarks. It is also possible that changes to or the cessation of a Fastmarkets benchmark or family of benchmarks may have an impact upon the financial instruments that reference them.</p> <p>Fastmarkets makes all reasonable efforts to maintain the highest standards of accuracy in its published benchmarks. Errors will be corrected as promptly as reasonably possible, with notification provided to users and subscribers at the earliest opportunity via a pricing notice.</p> <p>Any correction to published prices must be approved and signed off by a Fastmarkets Forest Products senior editor.</p> <p>When proposing to discontinue a benchmark, Fastmarkets must have thoroughly reviewed the following considerations:</p> <ul style="list-style-type: none"> • <u>Assessment process and methodology</u>: Is the price still assessable or has the assessment become obsolete? Has it used the right specifications? How robust is the assessment/index? • <u>Market fundamentals</u>: Is there insufficient spot activity in the market? Does the product lack features of commoditisation (spot assessments may have been premature)?

	<p>FBA expects that, in practice, a requirement to fully discontinue a benchmark is unlikely and a need to update the methodology is more likely.</p> <p>However, if Fastmarkets decided to go ahead with a proposal to terminate a benchmark, it would follow the same procedure set out for a proposal for a material change to the methodology. It would seek the views of the benchmark users via a consultation process and a notice that outlines the rationale for a discontinuation and presents a proposed timetable that would give users sufficient warning should the change go ahead.</p>
6. Commodity benchmarks	
Qualification as a commodity benchmark	Fastmarkets benchmarks are commodity benchmarks.
Title II or Annex II regime	Fastmarkets benchmarks meet the conditions specified in Article 19 of the BMR to be subject to the requirements of Annex II for commodity benchmarks.
Criteria that defines the relevant underlying physical commodity	The Fastmarkets FOEX PIX European pulp indices represent the value of physically traded NBSK and BHKP pulp delivered to Europe on a contract basis.
Publication of information relating to commodity benchmark	Fastmarkets benchmark information and related calculations and assessment processes are published on Fastmarkets' relevant websites and platforms in the form of pricing rationales and market commentaries, and the related methodologies are publicly available on the FBA webpage. As explained in Section 2 and Section 3, the volumes behind the PIX indices are fixed annually. PIX indices cover actual contract transaction prices, and no bids, offers or market indications are included.

Updates

This Benchmark Statement is published in accordance with Article 27 of the BMR. FBA will review it at least every two years and update it at any point if and when the information contained in the statement ceases to be correct or sufficiently precise, and including in any event in the following cases:

- (a) whenever there is a change in the type of the benchmark;
- (b) whenever there is a material change in the methodology used for determining the benchmark.

About Fastmarkets

Fastmarkets is a leading commodity price reporting agency (PRA) covering the metals, mining, minerals, forest products and agriculture industries. Its products and brands include Fastmarkets MB, AMM, RISI, FOEX, Random Lengths, AgriCensus and The Jacobsen.

For more than 100 years it has provided assessments and indices of commodity prices as well as news, research and commentary on the underlying markets, to enable trading in the markets in which it operates. Fastmarkets FOEX, based in Helsinki, Finland, produces PIX price indices for selected pulp, paper, recovered paper and packaging grades as well as for wood-based biomass and sawn timber. The first PIX index was launched in September 1996.

Fastmarkets' mission is to meet the market's data requirements honestly and independently, acting with integrity and care to ensure that the trust and confidence placed in the reliability of its pricing methodologies is maintained. It does not have a vested interest in the markets on which it reports.

Contact us

For more information, including methodology, please visit <https://www.fastmarkets.com/benchmark-admin> or contact us at info@fastmarketsbenchmarkadmin.com.