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**OFFSET PAPER FUTURES AND OPTIONS Q&A**

# I. INTRODUCTION TO OFFSET PRINTING PAPER

## 1. What are the main types of paper?

The China Paper Association (CPA) reports that in 2024, China produced 136.25 million metric tons of paper and paperboard and consumed 136.34 million metric tons. By purpose of use, paper is classified into four categories: printing and writing (P&W) paper, packaging paper, toilet and tissue paper, and specialty paper, respectively accounting for 20%, 63%, 9%, and 8% of the paper and paperboard produced in China.

* **P&W paper**: This includes coated printing paper, uncoated printing and writing paper, and newsprint paper.
* **Packaging paper**: This includes containerboard, corrugating medium, and white cardstock.
* **Toilet and tissue paper**: This includes toilet paper, facial tissues, paper handkerchiefs, napkins, paper towels, and paper diapers.
* **Specialty paper**: This includes special packaging paper, decorative base paper, and rolling paper.

## 2. What are the main types of printing and writing paper?

Printing and writing paper—an important carrier of information, knowledge, and culture—is categorized into uncoated printing and writing paper, coated printing paper, and newsprint paper. They vary in uses and characteristics. Specifically, uncoated printing and writing paper, including offset printing paper, writing paper, and xerographic copy paper, is primarily used for books, periodicals, and office. Coated printing paper, chiefly represented by coated woodfree paper, is commonly used in book covers, illustrations, and albums. Lastly, newsprint paper is an ideal choice for newspapers and magazines with its lightweight and ink absorption properties.

## 3. What is offset printing paper?

Offset printing paper (also known as “uncoated woodfree paper (UWP)”) is widely used in books, textbooks, magazines, notebooks, and color pictures, making it an important medium for dissemination of culture and knowledge, writing, and printing. As such, it is a major component of the papermaking industry and is closely related to a country’s economic and social development. Indeed, how much offset printing paper is consumed is a key measure of how modern and developed a country is.

Offset printing paper, made primarily from bleached wood pulp, is the archetypical type of fine and printing paper and the go-to choice for all mainstream books. At present, the vast majority of offset printing paper on the market is the double-sided variety (shortened to “offset paper” in this Q&A); and “offset paper” is the name that the industry usually uses when referring to offset printing paper. According to CPA and other relevant organizations, offset paper accounts for more than half of the uncoated printing and writing paper and around 40% of the P&W paper consumed in China.

## 4. What are the different types of offset paper?

Offset paper is highly standardized; it is classified by a number of quality indicators such as grammage and brightness. The most common kind of offset paper on the market, widely used for books, periodicals, and magazines, has a grammage of 60-90 g/m2. Offset paper with a grammage of 25-40 g/m2 is often referred to as lightweight paper (or low-density paper) and primarily used for dictionaries. Offset paper rated at 140 g/m2 and above, often called heavyweight offset paper and noted for its high surface smoothness and folding resistance, is mainly used for advertisement posters, premium product catalogs, clothing logos, meeting invitations, birthday cards, handicrafts, and packaging products.

By brightness levels, offset paper ranges from bright white and natural white to cream. Typically, the D65 brightness is 95% and above for bright white, between 80% and 85% for natural white, and below 80% for cream.

## 5. What is the history of offset paper?

Papermaking and printing are great inventions from ancient China and had a profound impact on global technology and civilization. In particular, papermaking revolutionized writing materials and greatly accelerated the dissemination of knowledge and accumulation of culture.

Rudimentary papermaking techniques were known during the Western Han Dynasty (ca 202 BC to 8 AD). In 105 AD, Cai Lun from the Eastern Han Dynasty improved them with raw materials such as tree barks, hemp, rags, and fishing nets and processes like shredding, grinding, roasting, and drying. This allowed him to produce paper suitable for writing and painting, thus became a key medium for the global spread of civilization.

With the advent of paper and ink in the 3rd century AD, seal-printing techniques began to emerge. Woodblock printing of the Tang Dynasty (618–907 AD) marked the birth of the printing technology, and the movable-type printing invented by Bi Sheng during the Song Dynasty (960–1279 AD) reduced the publishing and printing cost of books, making education more accessible than ever before and helping new ideas to spread. In the mid-15th century, Johannes Gutenberg of Germany invented metal movable-type printing after making improvements to inks and metallurgy techniques. In the early 19th century, European lead-type printing presses were introduced back to China. As papermaking and printing technology continued to advance, in 1904, German inventor Cašpar Hermann and American Ira Rubel attempted to transfer a design from a printing plate onto the rubber blanket of an impression cylinder and then onto a sheet of paper—a process that eventually evolved into today’s offset printing. In the decades that followed, to make the large-scale application of offset printing a reality, paper mills around the world would introduce many innovations and improvements that eventually led to the double-sided offset paper we use today.

## 6. How is offset paper produced?

Offset paper has two main production stages: stock preparation and papermaking. In the stock preparation stage, the pulp goes through a blending system, and then fillers and colorants are added. It then undergoes impurity removal and deaeration, followed by the addition of retention aids, strengthen agents, sizing agents, and other chemicals. In the papermaking stage, the pulp is diluted and then screened under pressure before being fed into the headbox of the fourdrinier machine. On the fourdrinier machine, the pulp undergoes forming, pressing, drying, surface sizing, additional drying, calendering, and winding. The finished reels are either rewound and slit into rolls of different specifications, or cut into sheets, then packaged for storage.

**7. How is offset paper, packaged, and transported?**

In general, offset paper is either packaged in rolls or sheets. Roll packaging comprises several layers of containerboards or corrugating medium with a minimum grammage of 120 g/m2 or kraft paper with a minimum grammage of 80 g/m2. Sheets packaging generally involves cutting the offset paper into reams of 200 to 500 sheets, which are then wrapped in coated woodfree paper or kraft paper and bundled into cases of typically 20 reams each.

Offset paper is usually transported by truck over short and medium distances, and in some regions by train or ship for longer distances. To avoid damage, offset paper is usually put on a flat and clean surface and covered by canvas during transportation.

## 8. What is the structure of the offset paper industry?

The offset paper industry comprises a wide array of companies engaged in pulping, papermaking, book publishing, printing, and stationery manufacturing. The upstream companies are those producing bleached softwood kraft pulp (BSKP)—the underlying of Shanghai Futures Exchange’s (SHFE) pulp futures—as well as bleached hardwood kraft pulp (BHKP), chemi-mechanical pulp (CMP), and the related chemical additives (such as starch, calcium carbonate, and caustic soda). A small number of offset paper mills also use bamboo pulp and recycled pulp as raw materials. The midstream segment consists of P&W paper factories, traders, and related warehousing and logistics companies, while the downstream segment encompasses book printers and publishers, stationery manufacturers, and others.

## 9. How are offset paper and pulp related?

The raw materials for offset paper can be BSKP—the underlying of SHFE’s pulp futures—as well as BHKP and CMP. The price of offset paper has some influence on the price of pulp and vice versa, but their prices are mostly affected by the supply-demand dynamics of their respective industries.

## 10. What are the major policies for China’s offset paper industry?

China takes pollution control and ecological protection by the papermaking industry seriously. Over the years, numerous policies, including the *Action Plan for the Prevention and Control of Water Pollution*, the *Industry Green Development Plan (2016–2020)*, the *National 13th Five-Year Plan for Eco-environmental Protection*, the *Regulations on Administration of Pollutant Discharge Permits*, and the *Guiding Opinions on Promoting the High-Quality Development of Light Industries*, were introduced to ensure the industry’s sustainability. In 2024, the *Opinions of the CPC Central Committee and the State Council on Accelerating Green Transition in All Areas of Economic and Social Development* called for vigorously advancing the green and low-carbon transition of the paper industry, expanding the use of energy-efficient, low-carbon, and clean manufacturing technologies and equipment, and updating and upgrading industrial process.

The *Outline of the 14th Five-Year Plan for the Paper Industry and its Medium- and Long-Term High-Quality Development* stated that, the paper industry—a critical and fundamental raw material sector closely linked to national economic and social development—possesses distinctive features of sustainable development. It is endowed with inherent green attributes, including renewable raw materials, recyclable products, the capacity for self-generated biomass energy, and the recyclability of key production chemicals. As the country enters the stage of high-quality development, people’s demand for a better life and a sound ecological environment has become more pressing, placing higher requirements on the provision of high-quality ecological products. Accordingly, the paper industry must regard green and low-carbon development as an intrinsic requirement for achieving high-quality development.

# II. SPOT OFFSET PAPER MARKET

## 11. How much offset paper is produced globally?

According to statistics, the global production of offset paper for books, periodicals, and office totaled approximately 45.72 million metric tons in 2023, down 5.1% year-on-year and accounting for 11.2% of the paper and paperboard produced that year. Between 2014 and 2023, the rise of digital media only had a moderate impact on offset paper as opposed to newsprint paper and coated woodfree paper. However, falling volume of commercial printing jobs such as advertisement inserts and brochures contributed to an annual production decline of 1.6% for offset paper over the period. Asia (particularly China, Indonesia, and Japan) was the largest producer of offset paper in 2023, representing 66.2% of the global output. It was followed by Europe (most prominently Germany, Sweden, and Finland) at 15.6%, North America at 10.1%, and South America at 5.8%.

## 12. How much offset paper is consumed globally?

According to statistics, the global consumption of offset paper totaled approximately 45.55 million metric tons in 2023, down 5.1% year-on-year and accounting for 11.1% of the paper and paperboard consumed that year. From 2014 to 2023, the apparent consumption of offset paper fell 1.7% per year over the period, but the relative regional consumption remained mostly unchanged. Specifically, Asia (notably China, India, and Japan) was the largest consumer in 2023 and accounted for 61.4% of the global total. It was followed by Europe (mostly Germany, France, and Italy) at 15.1%, North America at 10.7%, and South America at 6.2%.

## 13. How much offset paper is produced in China?

According to CPA, China has been the world’s largest producer of uncoated printing and writing paper (the majority of which is offset paper) since 2009 after surpassing the United States. However, production growth of offset paper in China slowed during the 12th Five-Year Plan and 13th Five-Year Plan periods (2011–2020), when its papermaking industry underwent structural changes toward higher-quality products and digital media gained popularity. Production rebounded in recent years, with the commissioning of large paper mills around the country. Offset paper output in China totaled 9.48 million metric tons in 2024, or 51.4% of the uncoated printing and writing paper and 7.0% of the paper and paperboard produced domestically.

## 14. How much offset paper is consumed in China?

According to statistics, in 2024, China’s apparent consumption of offset paper totaled around 8.71 million metric tons. The *Outline of the 14th Five-Year Plan for the Paper Industry and its Medium- and Long-Term High-Quality Development* projects China’s paper and paperboard production to grow at 2.5% per year to 170 million metric tons by 2035, equaling a per capita consumption of over 120 kg per year, on par with that of moderately developed countries. China’s consumption of offset paper has maintained stable growth momentum in recent years, thanks to steady demand for paper books among adult readers and strong resilience of the educational book market.

## 15. Where does China import and export its offset paper?

China’s import and export volumes are mostly influenced by the price differential between, and the supply-demand situations of, domestic and overseas markets. China imports offset paper from just a few countries and regions, while exports to a wider range of destinations. Indonesia is the largest supplier at over 50% of the total, followed by Japan, Russia, and the Taiwan region, combined making up more than 80% of China’s total imports. China exports offset paper to primarily Japan, the Philippines, Hong Kong SAR, Australia, and South Korea.

## 16. How is offset paper priced?

The paper industry is highly market-driven. Costs, profit margin, market demand, and quality difference all have an impact on the pricing of offset paper. Costs mainly consist of two parts: raw materials (mainly BSKP, BHKP and CMP, accounting for around 70%), and others, such as electricity, water, labor, chemical additives, effluent treatment, and equipment depreciation, etc.

## 17. What factors, in addition to costs of raw materials, affect the price of offset paper?

Because offset paper is widely used around the world, its price is influenced by many factors. Chief among them are the domestic and international economic conditions, shifts in worldwide reading habits, supply and demand structure, addition and elimination of production capacity, and national policies.

## 18. What has been the price trend of pulp in recent years?

The price fluctuations of pulp—the critical raw material—often constitute a main factor affecting the price of offset paper. In 2022, the price of the dominant SHFE pulp futures (with BSKP being the underlying asset) contract rose 11.1% from ¥5,738 yuan/metric ton at the beginning of the year to ¥6,726/mt at the end of the year. In 2023, that price fell 15.0% from ¥6,636/mt at the beginning of the year to ¥5,640/mt at year-end. In 2024, the same price rose 5.4% from ¥5,650/mt at the start of the year to ¥5,944/mt at year-end.

## 19. What has been the price trend of offset paper in recent years?

China’s offset paper market went through two distinct price periods between 2020 and 2024. From late 2019 to early 2020, price dropped substantially. But as the economy, market demand, and price of raw materials recovered, the price of offset paper also rebounded, reaching around ¥7,500/mt in the first half of 2021.From late 2021 to the first half of 2023, geopolitical tensions and rising energy cost pushed up the price of pulp worldwide, keeping offset paper at a high price point also. From the second half of 2023 onward, as China’s paper demand growth slowed and market supply and demand approached equilibrium, offset paper retreated to a low price point, hitting around ¥4,600/mt. Enterprises along the industrial chain face significant cost and price fluctuations, eagerly calling for hedging instruments.

# III. SHFE OFFSET PAPER FUTURES AND OPTIONS

## 20. What are the functions of offset paper futures and options?

**(1) Providing risk management instruments for the P&W paper market**

China is the world’s largest producer and consumer of P&W paper. Offset paper, as the major category within this sector, is characterized by a large market size, a high degree of standardization, and notable price volatility. Upon launch, SHFE’s offset paper futures and options will become China’s first derivatives on P&W paper, offering enterprises in the industry effective instruments to manage price fluctuation risks.

**(2) Improving the full-lifecycle risk management system for the pulp industry**

For upstream paper mills, pulp can account for over 70% of the production costs of offset paper; for downstream publishing and printing enterprises, paper costs may constitute more than half of their operating expenses. Together with pulp futures, SHFE’s offset paper futures and options will assist enterprises in controlling procurement costs and stabilizing sales revenues, thereby establishing a closed-loop price risk management system that spans from raw materials to finished products. Looking ahead, SHFE will accelerate the research and development of corrugating medium futures and options to extend the coverage to the packaging paper market. At that point, a comprehensive set of risk management tools will be available for all major products in the pulp and paper industry, enabling the futures market to better perform its functions of price discovery, risk management, and resource allocation.

**(3) Supporting the green transition of the paper industry**

In selecting and certifying deliverable brands for offset paper futures, SHFE will give priority to producers accredited with relevant qualifications, e.g., the “Green Factory” certification issued by the Ministry of Industry and Information Technology, thereby leveraging market mechanisms to promote the green and low-carbon transition of the paper industry. At the same time, SHFE is intensifying efforts in developing new green products—futures and options for corrugating medium, which primarily utilizes recycled paper as raw material, thereby directly serving the carbon peaking, carbon neutrality, and green development strategies.

**(4) Strengthening China’s position in the global P&W paper industry**

Once launched, SHFE’s offset paper futures and options will be the world’s first derivatives on P&W paper. Their listing will capitalize on China’s scale advantage as the largest importer of pulp and the largest producer and consumer of P&W paper. Together with pulp futures, they will further enhance China’s pricing power in the global market.

## 21. What are the impacts of offset paper futures and options on the paper industry?

The listing of offset paper futures and options will help upstream, midstream, and downstream companies in the P&W paper industry to be informed about demand changes and market trends, so as to develop more targeted production and sales strategies. Meanwhile, offset paper futures and options will help create a more transparent paper industry in which all market participants can obtain more accurate and timely information. This in turn promotes a fairer and healthier market, provides more expedient and efficient means of risk management, and supports the real economy.

Pulp and offset paper futures and options allow paper mills to lock in the cost of raw materials, thereby effectively coping with the changes in pulp and offset paper prices. They also enable them to adjust the production plan and inventory based on the price signals from the futures market. Trading companies can similarly use pulp and offset paper futures and options to lock in the purchase price and profit margin in advance, and to dynamically manage their inventory to avoid the price risk. These derivatives also enable downstream companies to fix the purchase price, thereby reducing cost uncertainty and enhancing their profitability and competitiveness.

**22. How will offset paper futures and options promote the green and low-carbon transition of the paper industry?**

Since the beginning of the new century, and particularly since the 18th CPC National Congress in 2012, China has stepped up efforts to tackle environmental pollution. In the paper industry, a series of measures have been introduced to completely shed its former reputation as “major polluter”. These include the establishment of a stringent pollutant discharge permit system that urges enterprises to proactively conserve energy and reduce emissions, the elimination of nearly 50 million tons of outdated production capacity, and strict crackdowns on unauthorized discharges. The *Opinions of the CPC Central Committee and the State Council on Accelerating Green Transition in All Areas of Economic and Social Development* called for vigorously advancing the green and low-carbon transition of the paper industry and expanding the application of energy-efficient, low-carbon, and clean manufacturing technologies and equipment. Against this backdrop, the paper industry has entered into a new round of transformation and upgrading. The listing of offset paper futures and options will strengthen risk management capabilities across upstream, midstream, and downstream enterprises in the P&W paper industry. Moreover, through arrangements such as the selection of deliverable grades and the certification of deliverable brands, SHFE will guide producers to adopt environmentally friendly processes, thus leveraging market mechanisms to promote the industry’s green and low-carbon transition, and contributing to the national strategic goals of carbon peaking, carbon neutrality, and green development.

## 23. What are the design philosophies of the offset paper futures?

In designing the offset paper futures, SHFE drew on the successes of its existing products while also fully accounting for the unique features of the new product as well as risk prevention and market development goals. A number of measures have been taken to safeguard the transparency and fairness of the offset paper futures market and further its sustainability. For example, SHFE has set a price limit, margin requirement, and position limit (as well as other risk controls) tailored to the offset paper market to ensure a stable and healthy market. Additionally, in line with industry realities and trends, SHFE has designed a physical delivery framework, covering both warehouse and factory delivery, that reflects the practices of spot trades and storage and logistical operations as well as the characteristics of the product.

For details on the offset paper futures contract and rules, please refer to the *Offset Paper Futures Contract of the Shanghai Futures Exchange* and the *Offset Paper Futures Rules of the Shanghai Futures Exchange*.

## 24. What are the design philosophies of the offset paper options?

In designing the offset paper options, SHFE considered factors such as market needs, the characteristics of the underlying, and risk management. On account of the uniqueness and the state of the options market, trading of the options will be facilitated by market makers, who are required to provide the market with valid prices. At the same time, conventional risk controls, such as margin requirement, position limit which is calculated on an aggregate basis with futures positions, and daily price limit also apply. These measures address the various risk management needs in each stage of the paper industry, while also making for a more liquid and smoother-running offset paper options market. For details about the contract, please refer to the *Offset Printing Paper Option Contract of the Shanghai Futures Exchange*.

# IV. TRADING, CLEARING, AND RISK MANAGEMENT

## 25. What are the risk control measures for offset paper futures?

Based on the *General Exchange Rules of the Shanghai Futures Exchange*, the *Risk Management Rules of the Shanghai Futures Exchange*, and the characteristics of the spot offset paper market, SHFE has put in place a range of risk control measures in the *Offset Paper Futures Rules of the Shanghai Futures Exchange* to ensure the smooth listing and sound operation of offset paper futures. Examples include margin requirement, price limit, position limit, trading limit, and forced position liquidation.

## 26. How is the daily settlement price of offset paper futures contracts calculated?

The daily settlement price of an offset paper futures contract is the volume-weighted average price of all trades in that contract executed on that trading day.

## 27. What is the margin requirement for offset paper futures?

The minimum trading margin for an offset paper futures contract is 5% of the contract value. During the trading of an offset paper futures contract, SHFE may adjust margin requirements based on market risk level, such as when the open position reaches a certain threshold, the contract is approaching delivery, or the contract hits the price limit on several consecutive trading days.

SHFE applies differentiated margin rates over the lifecycle of an offset paper futures contract (i.e., from the listing date to the last trading day) in accordance with the provisions of the *Offset Paper Futures Rules of the Shanghai Futures Exchange* and the *Risk Management Rules of the Shanghai Futures Exchange.*

## 28. What are the rules for determining and approving the hedging quota for offset paper futures contracts?

SHFE manages the hedging quota for offset paper futures through a review and approval system. If the general position limit is too low to meet an enterprise’s hedging needs, it may apply for a hedging quota. SHFE determines and approves such quotas based on two factors: the applicant’s bona fide production, trading, and consumption volume; and market conditions. An applicant should submit the necessary supporting materials, such as its production plan or trade agreement.

When a futures contract enters the “nearby delivery month,” SHFE’s trading system will automatically adjust the hedging quota to the lower of the previously approved hedging quota for regular months and the general position limit for the contract in nearby delivery month. This adjustment converts the hedging quota for regular months to hedging quota for nearby delivery month, and is done to help manage market risks as the contract approaches the delivery month. However, if any enterprise finds the adjusted level is not sufficient to cover its hedging needs, it may separately apply to SHFE for a higher hedging quota for nearby delivery month.

# V. DELIVERY AND RELATED RULES

## 29. What is the contract size and delivery unit of offset paper futures contracts?

Each contract corresponds to 40 metric tons of offset paper. The delivery unit is also 40 metric tons per standard warrant. Delivery should be made in integer number of standard warrants.

## 30. How is the final settlement price of offset paper futures calculated?

The final settlement price of an offset paper futures contract is the arithmetic mean of the settlement prices of the last five trading days on which there has been a trade in the contract.

## 31. How are offset paper futures delivered?

Offset paper futures are physically delivered at delivery warehouses and factories. Of the two types of venues, factory delivery offers more flexibility, with a choice between producing factories and trading factories. The delivery period is the two consecutive business days after a contract’s last trading day.

## 32. Why offer factory delivery?

Delivery at places of manufacture (factory delivery) enables individualized delivery arrangements and lower costs. Given offset paper’s wide range of specifications, traders and downstream buyers all hope to minimize the cost of the intermediate stages by placing delivery orders according to a centralized plan or as needed. Factory delivery allows delivery through both producing factories and trading factories; its negotiation-based take-delivery system also permits customization in terms of the grammage, product width, and more. Furthermore, the availability of specifications beyond the prescribed deliverables helps expand the scope of deliverable products. Moreover, factories can issue warrants with bank guarantee or other forms of security recognized by SHFE, without having to make the products beforehand. This reduces not only the funds and resources needed, but also the load-in operations, storage period, and logistical handling, which results in lower logistics costs for both the buyer and the seller.

## 33. Can individuals participate in the delivery of offset paper futures?

The *Delivery Rules of the Shanghai Futures Exchange* provides that any client who is not able to deliver or accept value-added tax (VAT) special invoice is not permitted to make or take delivery.

A natural-person client should not hold any position on a futures contract by the closing of the fifth trading day before the last trading day of the contract. Starting from the fourth trading day before the last trading day, any such open position will be liquidated by SHFE in accordance with relevant rules.

## 34. How are the standard warrants for offset paper futures created?

Standard warrants for offset paper futures are classified into warehouse standard warrants and factory standard warrants.

“Warehouse standard warrant” is a document for taking delivery of commodities issued by a delivery warehouse to the owner of the commodities pursuant to the *Standard Warrant Rules of the Shanghai Futures Exchange* via SHFE’s Standard Warrant Management System, after the delivery warehouse completes load-in inspection to confirm the commodities are deliverable.

“Factory standard warrant” is a document for taking delivery of commodities issued by a delivery factory pursuant to the *Factory Delivery Rules of the Shanghai Futures Exchange* via SHFE’s Standard Warrant Management System according to the procedures prescribed by SHFE.

## 35. What is the validity period of a standard warrant for offset paper?

Standard warrants for offset paper: The offset paper underlying each standard warrant should be of the same manufacturer, brand, grammage, and width, with production dates within a period of 15 consecutive days.

**Validity period of a warehouse standard warrant**:

* Domestically produced offset paper intended for physical delivery should be loaded into a warehouse within three months from the production date. A standard warrant is valid till December 31 of the same year if the production date is on or before June 30, and till June 30 of the following year if it is on or after July 1. Warrants beyond these dates will be canceled, with the underlying offset paper converted into spot product.
* Imported offset paper intended for physical delivery should be loaded into a warehouse within three months from the date it arrives at the port. A standard warrant is valid till December 31 of the same year if the arrival date is on or before June 30, and till June 30 of the following year if it is on or after July 1. Warrants beyond these dates will be canceled, with the underlying offset paper converted into spot product.

**Validity period of a factory standard warrant**: A factory standard warrant is valid for delivery for 12 months from the date of creation; no delivery against futures may be made with the warrant beyond this validity period. The owner should either apply for taking delivery or convert the factory standard warrant into a bill of lading for spot goods, and then cancel the warrant before it expires, or the warrant will be automatically canceled with the underlying offset paper converted into spot product. The method of taking delivery is to be jointly determined by the factory and the owner.

# VI. Key Trading Rules for Offset Paper Options

## 36. What is an option?

An option is an agreement between a buyer and a seller that gives the buyer the right to purchase or sell a certain quantity of a specified asset (i.e., the underlying of the option) at a specified price (i.e., strike price) and future time.

## 37. What rights is an option buyer entitled to?

In an option trade, the party that buys the option is called the buyer. The buyer pays a fee (i.e., premium) to the option seller in exchange for the right to buy or sell an agreed quantity of the underlying asset at an agreed price and time. If this price moves against the buyer, the buyer may abandon this right. An option is called as such because the buyer is free to exercise or not exercise this right.

## 38. What are the obligations of an option seller?

When an option buyer submits an exercise request, the option seller is obligated to fulfill the contract by buying or selling a given quantity of the underlying at the strike price specified in the contract.

In addition, the option seller is required to post margin as security for the performance of this obligation when the option expires.

## 39. What is the option premium?

Option premium or simply premium is the payment made by an option buyer to the option seller to obtain the right under the option contract. It is in effect the price of an option contract.

## 40. What are call options and put options?

A call option is an option that allows the buyer to purchase the underlying asset upon exercising that option. The higher the price of the underlying at the time of exercise, the higher the profit for the buyer.

Conversely, a put option is an option that allows the buyer to sell the underlying asset upon exercising that option. The lower the price of the underlying at the time of exercise, the higher the profit for the buyer.

## 41. What is the strike price of an option?

Strike price is the price specified in an option contract at which the option buyer is entitled to buy or sell the underlying asset at a specified time in the future.

## 42. What influences the price of an option?

The price of an option is generally influenced by factors such as the price of the underlying asset, volatility, time to expiration, strike price, and interest rate.

(1) Price of the underlying asset. Assuming all other variables remain unchanged, when the price of the underlying asset increases the price of a call option (*Pc*) will rise and that of a put option (*Pp*) will fall; when the price of the underlying asset decreases, *Pc* will fall and *Pp* will rise.

(2) Volatility. Volatility measures how much the price of the underlying asset changes. Assuming all other variables remain unchanged, a higher volatility means a higher *Pc* and *Pp*.

(3) Time to expiration. For option buyers, a longer time to expiration means higher likelihood to make a profit. Assuming all other variables remain unchanged, the further away an option is from expiration, the higher the *Pc* and *Pp* are.

(4) Strike price. Assuming all other variables remain unchanged, *Pc* decreases with increasing strike price and *Pp* increases with increasing strike price.

(5) Interest rate. Assuming all other variables remain unchanged, a higher interest rate means a higher *Pc* and a lower *Pp*. In addition, the further away an option is from expiration, the more its price is affected by a rate change.

## 43. What is the underlying asset of an offset paper option?

The underlying of an offset paper option is one offset paper futures contract, i.e., a trader will receive this futures contract upon exercising (or fulfilling) the option. For example, a trader buys an offset paper long option OP2601CXXXX at a specified price (XXXX refers to the strike price), the underlying of which is the futures contract OP2601. After exercising the option, the trader will obtain a long position in the OP2601 contract at ¥XXXX yuan/metric ton.

## 44. Can one apply for a hedging quota for offset paper options?

Offset paper options and the underlying futures share the same hedging quota. Consequently, the hedging quota obtained by an investor can be used in the futures market exclusively, the options market exclusively, or a mixture of both.

Long hedging quota = long futures + long calls + short puts

Short hedging quota = short futures + short calls + long puts

## 45. How can an option buyer and seller terminate its position?

An option buyer may settle its position through the following three methods:

(1) Close-out. An option position may be terminated by taking a reverse position in the same option contract. This is referred to as “closing-out.” For an option buyer, closing out its position means selling its existing position in the option contract.

(2) Exercise. Exercise refers to the exercise by an option holder (i.e., buyer) of the right granted by the option at the time specified in the option contract. For offset paper options, the buyer may submit an exercise request on any trading day up to and including the expiration date. Upon exercising the option, the buyer either purchases (if a call option) or sells (if a put option) an agreed quantity of the underlying futures contract at the agreed price. By doing this, the buyer will have terminated its option position, but will hold a corresponding position in the underlying futures contract instead.

(3) Abandonment. An option buyer may submit an abandonment request on the expiration date only. If the price of the underlying futures contract is lower than the strike price of a call option or higher than the strike price of a put option on the expiration date, the buyer will usually abandon the option. After the expiration date, the buyer’s option position will be automatically terminated and no corresponding futures position will be created.

## 46. What does it mean to “exercise” an option?

Because an option seller has an obligation rather than a right under the contract, the only active way to terminate its position is to go long on the same contract. Alternatively, the position can be closed involuntarily when the buyer exercises the option (which gives the seller an opposite futures position) or when the option is allowed to expire without such exercise.

## 47. When can an option buyer exercise its option? What are the different “styles” of exercise?

Exercising an option refers to the situation where the buyer exercises the right granted by the option to buy or sell a certain quantity of the underlying asset at a specified price and time. If the buyer chooses to exercise its option, the seller will be obligated to fulfill it.

The time of exercising an option varies based on the option style. The two most common styles are American and European. The buyer of an American-style option can exercise it on any trading day up to and including the expiration date, whereas the buyer of a European-style option can exercise it on the expiration date only.

## 48. When can an option buyer exercise its option? When can a buyer of offset paper option submit an exercise request?

An option buyer can exercise its option at the time indicated in the contract specifications.

Because offset paper option is American style, a buyer can submit an exercise request during trading hours on any trading day before the expiration date, or an exercise or abandonment request before 3:30 p.m. on the expiration date.

## 49. What is the “automatic exercise” of an option on the expiration date?

If an option buyer does not submit an exercise or abandonment request on the expiration date, SHFE will compare the option’s strike price with the current-day settlement price of the underlying futures contract to determine whether the option is in-the-money (ITM). ITM options will be automatically exercised by SHFE, while at-the-money (ATM) and out-of-the-money (OTM) options will be automatically abandoned.

SHFE also allows investors with special trading needs to request the abandonment of ITM options or the exercise of ATM and OTM options. SHFE gives priority to such requests from clients, and will automatically exercise the remaining options.

## 50. How can one close out the futures position created by the exercise or fulfillment of an option?

At daily clearing, long and short futures positions resulting from the exercise or fulfillment of options can be netted among themselves or with pre-existing futures positions in the opposite direction.

Alternatively, investors can close out such futures positions as normal on the day following the day of exercise or fulfillment.