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August 24, 2012

Re: File Number SR-NYSEArca-2012-28

Elizabeth M. Murphy
Secretary
Securities and Exchange Commission
100 F Street, NE
Washington, DC 20549-1090

Dear Ms. Murphy:

We[1] are writing on behalf of J.P. Morgan Commodity ETF Services LLC, as sponsor (the "**Sponsor**") of JPM XF Physical Copper Trust (the "**Trust**"). The Sponsor appreciates the opportunity to respond to the Securities and Exchange Commission's (the "**Commission**") request for comments pursuant to Release No. 34-67470 (the "**Order**") regarding the proposed rule change by NYSE Arca, Inc. (the "**Exchange**" or "**NYSE Arca**") that would permit the listing and trading of shares of the Trust ("**Shares**") on the Exchange pursuant to NYSE Arca Equities Rule 8.201.[2]

The Sponsor is an indirect wholly-owned subsidiary of JPMorgan Chase & Co. ("**JPMorgan**").[3] The Trust was first conceived of by the Sponsor in June 2010, as a means of providing a simple

[1] In preparing this letter, Davis Polk & Wardwell LLP has relied, without independent verification, upon the information furnished to it by the Sponsor.

[2] On April 2, 2012, NYSE Arca filed the proposed rule change with the Commission, which was published on April 16, 2012 (Release No. 34-66816, 77 Fed. Reg. 23772) (the "**Notice**"). On May 30, 2012, the Commission extended the period for Commission action on the Notice to July 19, 2012. *See* Release No. 34-67075, 77 Fed. Reg. 33258 (June 5, 2012).

[3] The Trust will be governed by the provisions of the Trust Agreement by and between the Sponsor and Wilmington Trust Company, as trustee (the "**Trustee**"). The Trustee will delegate to the Sponsor its duty and authority to administer the Trust, as defined and limited by the terms of the Trust Agreement. Pursuant to a Trust Servicing Agreement and an Agency Services Agreement, the Trust and the Sponsor will appoint an administrative agent (the "**Administrative Agent**"), which will initially be J.P. Morgan Treasury Securities Services, a division of JPMorgan Chase Bank, National Association, to administer various daily functions of the Trust. Pursuant to a Valuation Agreement with the Sponsor, Metal Bulletin Ltd. will serve as an independent, third-party valuation agent for the Trust (the "**Valuation Agent**"). Each of the Sponsor, the Trust and each Authorized Participant will also enter into a separate Warehouse Agreement with Henry Bath Group (the "**Warehouse-keeper**"), pursuant to which the Warehouse-keeper will (i) store copper owned by the Sponsor, the Trust and each Authorized Participant of the Trust (each, an "**Authorized Participant**"), as applicable, and (ii)

and cost-effective way for investors to gain investment exposure to the performance of the global copper market.[4] The Sponsor has invested substantial effort and resources into the design, development and structure of the Trust, and in doing so has carefully considered the questions and potential concerns raised in the Order.[5] The Sponsor welcomes the opportunity to have addressed such matters in this submission and to provide the Commission with information to support approval of the proposed rule change.

This submission consists of three parts:

- Part I summarizes the standards of Section 6(b)(5) of the Securities Exchange Act of 1934 (as amended, the "**Exchange Act**") and the reasons why the Sponsor believes that the proposed rule change not only is consistent with, but would also further the goals of Congress expressed in, Section 6(b)(5), and would be beneficial to investors.

- Part II summarizes the key points of the Sponsor's responses to the Order, including the main reasons for which the Sponsor believes that certain commenters[6] have misunderstood the Trust and the underlying copper market.

- Part III addresses each of the questions posed by the Commission in the Order.[7]

I. Summary of Applicable Standards

Section 6(b)(5) requires an exchange's rules to be designed to prevent fraudulent and manipulative acts and practices, to promote just and equitable principles of trade, to remove impediments to and perfect the mechanism of a free and open market and, in general, to protect investors and the public interest. The Sponsor believes that, based on the information presented in the Notice, the Arca Letter, the Registration Statement and this submission, it is clear that approving the proposed rule change would be consistent with the Section 6(b)(5) standards. The Sponsor respectfully submits, however, that in making its determination, the Commission should

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effect transfers of copper in connection with the creation and redemption of baskets of 2,500 Shares of the Trust ("**Creation Units**") and the payment of the Trust's expenses. The Administrative Agent and the Warehouse-keeper are affiliated with the Sponsor. The Valuation Agent is independent of, and not affiliated with, the Sponsor.

[4] The Sponsor filed a preliminary registration statement for the Shares with the Commission on Form S-1 under the Securities Act of 1933 (as amended, the "**Securities Act**") on October 22, 2010 (Registration No. 333-170085), and filed the most recent amendment to the registration statement, Amendment No. 5, on July 12, 2011 (the "**Registration Statement**"). References to the Registration Statement in this submission are to Amendment No. 5.

[5] The Order refers to several comment letters submitted by members of the public, including the letter from Vandenberg & Feliu, LLP ("**V&F**") dated May 9, 2012 (the "**V&F Letter**"), and the letter from V&F dated July 13, 2012 ("**V&F Letter II**"). V&F represents the hedge fund RK Capital LLC as well as several end-users of copper. In response to the V&F Letter, NYSE Arca submitted a comment letter dated June 19, 2012 (the "**Arca Letter**"). In addition, U.S. Senator Carl Levin submitted a comment letter relating to the Notice dated July 16, 2012 (the "**Levin Letter**").

[6] References in this letter to the "commenters" refer, unless otherwise noted, to the authors of the V&F Letter, V&F Letter II and the Levin Letter.

[7] Additional information in response to the Commission's questions is provided in annexes to this submission.

also consider the numerous ways in which disapproving the proposed rule change would be inconsistent with Section 6(b)(5).

A. Protecting Investors and the Public Interest

In passing the Exchange Act, Congress explicitly recognized the important and pervasive role of the securities markets to the public.[8] Today, over half of Americans invest in stocks.[9] Many of these investors consider investments in non-traditional asset classes, such as commodities, to be an essential element in portfolio diversification.[10]

The creation of new types of securities products that provide access to asset classes other than stocks and bonds is critical for such investors. For many people, securities products such as physical metal exchange-traded vehicles ("**ETVs**"), which can be held in traditional brokerage accounts just like stocks and bonds, have become an important investment option. The large amount of assets currently held by physical metal ETVs,[11] the Sponsor believes, can be attributed to the many features of such vehicles that are highly valued by investors, including the following:

- Transparency: Physical metal ETVs publicly report their holdings every day.
- No counterparty risk: There is no counterparty risk because physical metal ETVs hold a tangible asset.
- Lack of tracking error: The net asset value per share and the market price both closely track the spot price of the metal because the assets of physical metal ETVs consist almost entirely of the relevant metal.
- Publicly available information: Physical metal ETVs provide ongoing disclosure to investors required under the Securities Act and the Exchange Act.
- Simple to hold: Shares of physical metal ETVs are held in a brokerage account, just like any other securities.
- Tax treatment: Physical metal ETVs are grantor trusts and distribute 1099s to investors. By contrast, futures-based ETVs are publicly traded partnerships; their investors, as partners, receive K-1s, which many investors find burdensome.

[8] See Exchange Act Section 2(1) ("transactions in securities as commonly conducted upon securities exchanges and over-the-counter markets are affected with a national public interest"; securities transactions "are carried on in large volume by the public generally" and "constitute an important part of the current of interstate commerce").

[9] Gallup Poll Social Series: Economy and Personal Finance, April 7-11, 2011, available at http://www.gallup.com/poll/ File/ 147215/ Best_Investment_110420.pdf.

[10] See "Beginners' Guide to Asset Allocation, Diversification, and Rebalancing," http://www.sec.gov/investor/pubs/assetallocation.htm.

[11] As of August 10, 2012, according to JPMorgan research, physical metal ETVs globally held assets worth approximately $140.7 billion.

- No minimum investment: An investor may hold as little as a single share of a physical metal ETV; by contrast, the minimum size for a futures investment is one contract, which may represent thousands of dollars of exposure to the underlying commodity.

- Fully funded investment: Unlike an investment in futures or swaps, an investment in shares of a physical metal ETV is fully funded at the time of investment and does not give rise to the potential for leveraged losses that might exceed the amount invested.

- Liquidity: Shares of physical metal ETVs are listed and trade on an exchange, and can be bought or sold at any time during the trading day.

- No rolling of futures: Unlike futures-based ETVs, physical metal ETVs do not need to "roll" assets, which avoids brokerage costs, the risk of front-running by other traders, and the risk of losses when the underlying futures market is in contango.[12]

The Sponsor believes that it would be inconsistent with the protection of investors and the public interest, and thus contrary to the principles of Section 6(b)(5), for the Commission to disapprove the proposed rule change. As explained in the Arca Letter,[13] the Trust is functionally almost identical to existing physical metal ETVs, which have become an important component of the market. Empirical evidence suggests that the underlying markets of other existing physical metal ETVs and the copper market are consistent.[14] The Sponsor submits that it is in the public interest to permit the development of physical metal ETVs such as the Trust that offer new investment options to investors, and to allow such vehicles to hold copper, as is permitted by listing venues in other countries such as the United Kingdom. The Trust offers transparency, liquidity and other benefits, as described herein, and in the absence of empirical evidence that the listing of the Trust's Shares would lead to fraudulent or manipulative acts or practices, the Sponsor believes that the Commission should approve the proposed rule change.

B. Preventing Fraudulent and Manipulative Acts and Practices

The Sponsor strongly disagrees with the claims of certain commenters who speculate that the listing of the Trust's Shares will lead to fraudulent and manipulative acts and practices. In fact, the Sponsor believes the opposite: the Trust may well reduce the potential for fraud or manipulation in the physical copper market, as discussed below in Section II.A. and in the response to Question 11.1 in Section III. For example, prior to July 16, 2011, locational premia (essentially, prices) for physical copper were reported on an infrequent basis, available only by subscription, and only for certain broad regions (e.g., Western Europe). Since July 16, 2011, however, in anticipation of the Trust's potential launch, the Trust's Valuation Agent has determined the locational premium for physical copper in each of the Trust's approved warehouse locations on a daily basis, and published it on a weekly basis. This has increased transparency in all of the relevant markets. Transparency will be further enhanced if the

[12] In a contango market, longer-dated futures contracts have a higher price than near-dated contracts; thus, when a futures-based ETV rolls its contracts in a contango market, such vehicles are forced to "sell low and buy high." Over time, if the futures of a commodity are in contango, an investment in futures on such commodity as compared to an equal investment in the underlying commodity will be worth less because of the effect of contango.

[13] See Arca Letter, at 6.

[14] Please see the responses to Questions 9.4 and 9.5 in Section III below.

proposed rule change is approved and the Trust's Shares are listed, because the Trust will post the locational premia on its website on a daily basis and the Exchange will continuously disseminate pricing information as part of its required intraday indicative value reporting. Previously unreported non-exchange-registered stocks used for the creation of Trust Shares will also be published daily, further increasing transparency of the market. The Trust will also furnish complete visibility into creation and redemption activity by certain Authorized Participants.

C. Not Permitting Unfair Discrimination or Regulating Matters Not Related to the Purposes of the Exchange Act

The Sponsor believes that approving the proposed rule change would not raise any unfair discrimination issues. The Sponsor also notes that the securities issued by the Trust are, in fact, governed by the Exchange Act and within the purview of the SEC, and therefore the proposed rule change clearly relates to the purposes of the Exchange Act consistent with 6(b)(5). Further, because the underlying asset of the Trust is a commodity, trading in the underlying market is also subject to regulation under the Commodity Exchange Act and by the Commodity Futures Trading Commission (the "**CFTC**"). The CFTC has explicit anti-fraud and anti-manipulation authority that extends over the U.S. physical commodity markets.[15] In addition, the Department of Justice has the ability to pursue antitrust violations such as concerted buying and selling involving commodities under the federal antitrust laws.

Finally, an affiliate of the Sponsor, J.P. Morgan Securities plc ("**JPMS plc**"), is a ring-dealing member of the London Metal Exchange ("**LME**"). As an LME member, JPMS plc is subject to the rules of the LME in respect of both its LME and non-LME metal trading activities. The LME also has broad rights to obtain information relating to the activities of LME members and their affiliates if the LME has cause to suspect undesirable or improper trading that affects the copper markets, including the markets for both LME-warranted and non-warranted copper.[16] Moreover, as indicated in the Notice, the Exchange has entered into a comprehensive surveillance sharing agreement with the LME that applies to trading in copper.[17]

D. Removing Impediments to, and Perfecting the Mechanism of, a Free and Open Market and a National Market System

The Commission permitted the first U.S. listing of a physical metal ETV, SPDR Gold Trust, in 2004. Since then it has also permitted the listing of ETVs that hold silver, platinum and palladium. Currently, however, only nine[18] physical metal ETVs trade on U.S. exchanges. By contrast, the London Stock Exchange ("**LSE**") alone now lists 33 physical metal ETVs, including ten base metal ETVs that invest in copper, nickel, tin, lead, aluminum and zinc.

The Sponsor appreciates the paramount importance of the Commission's mission to protect investors and maintain fair, orderly, and efficient securities markets. The Commission, and Congress, have also recognized, however, the importance of helping U.S. exchanges remain

[15] See the response to Question 11.1 below.

[16] See the response to Question 11.1 below.

[17] See Notice, at 58.

[18] SPDR Gold Trust, ETFS Platinum Trust, ETFS Physical Palladium Shares, ETFS Gold Trust, ETFS Physical Precious Metal Basket Shares, ETFS Physical Silver Shares, ETFS White Metals Basket Trust, iShares Gold Trust and iShares Silver Trust.

competitive in the international marketplace.[19] The Sponsor respectfully submits that approving the proposed rule change and allowing the listing of the Trust's Shares would further advance this goal by demonstrating to future sponsors of new products that the Commission remains committed to fostering innovation in the U.S. securities markets.

[19] See, e.g., Amendment to Rule Filing Requirements for Self-Regulatory Organizations Regarding New Derivative Securities Products, Release No. 34-40761 (Dec. 8, 1998) (noting "increasing competition from overseas and over-the-counter ('OTC') derivatives markets"); Dodd-Frank Wall Street Reform and Consumer Protection Act Sec. 737(a)(4)("the [CFTC] shall strive to ensure that trading on foreign boards of trade in the same commodity will be subject to comparable limits and that any limits to be imposed by the Commission will not cause price discovery in the commodity to shift to trading on the foreign boards of trade").

II. Summary of Responses

For the reasons described above, the Sponsor believes that the listing of the Trust will be beneficial to investors in the securities markets. The remainder of this letter focuses in large part on the effect of the Trust on the underlying physical commodity market, in response to the questions in the Order. The information that the Commission has requested focuses on several areas: (i) the factors that generally affect the availability, price and volatility of copper, (ii) the potential impact of the Trust on the availability, price and volatility of copper and the impact that existing physical metal ETVs have had on their respective markets, and (iii) the risk of fraudulent or manipulative trading of the Trust's Shares. The Sponsor believes that the data and other information provided in this submission in response to the questions in the Order support approval of the proposed rule change. Before addressing the Commission's questions in detail, the Sponsor would like to:

- Sets forth certain key reasons for which the Sponsor believes that the commenters have misunderstood the Trust and the functioning of the underlying copper market; and

- Describe the manner in which, contrary to the commenters' assertions, the Sponsor believes that the listing of the Trust will be beneficial not only to investors but also to participants in the underlying copper market.

A. The Trust's copper will be accessible and transparent to participants in the physical copper market.

Virtually all of the commenters' arguments in opposition to the proposed rule change stem from one erroneous premise: that the Trust will remove copper from the physical market, making it unavailable to manufacturers and fabricators. The Sponsor disagrees. As discussed below, the Trust will not remove copper from the physical market; rather, the Sponsor expects that the Trust will represent a transparent and accessible alternative by which underlying market participants can access or offload physical copper inventory and associated price risk.

Copper deposited in the Trust can be readily withdrawn for resale or use. Each Share will represent a *pro rata* interest in the copper held by the Trust. As such, copper deposited in the Trust is available for withdrawal in accordance with the Share redemption procedures set forth in the Registration Statement on any business day by any Authorized Participant.[20] The redeemed copper will be transferred within three business days from the date of the Share redemption, and can then be:

- sold in the OTC market for cash;

- swapped in the OTC market for copper in a different location or brand; or

- removed from the warehouse and consumed.

[20] Even a relatively small amount of metal can be obtained through redemption, because of the relatively small size of a Creation Unit, the minimum number of Shares that may be submitted for redemption (2,500 Shares, equivalent to roughly one lot (in other words 25 metric tons) of copper at the Trust's inception). Authorized Participants are required to pay a fixed transaction fee to the Trust's Administrative Agent (expected to be roughly $500 per transaction at the time of registration). See Registration Statement, at 66-69.

All of the transactions described above are commonplace in the current market. When purchasers take physical delivery under LME contracts, for example, they cannot (as in the case of Trust redemptions) choose the location at which the warranted copper is deliverable; purchasers regularly sell or swap warrants to acquire warrants that relate to their preferred location.[21]

Because the Trust will track underlying copper prices, it will serve as an efficient alternative to the physical OTC market as a source of immediately available copper. As discussed in part B below of this Executive Summary, the Trust's price alignment mechanisms are expected to result in close tracking of the price of the Shares in the secondary market to the market value of the copper that can be received on redemption of the Shares. Purchasing Shares in the secondary market and submitting them for redemption can therefore be viewed as an efficient means, and a new alternative to existing means, of acquiring the corresponding *pro rata* amount of physical copper. The redemption of shares for underlying metal (a form of "exchange for physical" transaction) is already a well-established practice in relation to existing physical metal ETVs. Shareholders of such ETVs commonly engage authorized participants to redeem shares on their behalf in order to obtain the underlying physical metal. This has allowed existing physical metal ETVs to serve as a cost-efficient and transparent source of physical metal that is an alternative to traditional metal exchanges or OTC markets. The Sponsor has every reason to believe that the Trust will serve a similar function.

The deposit of copper into the Trust will not affect the amount of copper on LME warrant. The commenters allege in particular that the Trust will create a shortage of copper on LME warrant. As made clear in both the Notice and the Registration Statement,[22] the Trust will not accept copper that is LME warranted. Nor, as discussed below in the response to Questions 7.1 and 7.2 in Section III, does the Sponsor expect that Authorized Participants would be likely to take copper off LME warrant for deposit into the Trust, as it would not (under current conditions) be time- or cost-efficient to do so. In any event, copper redeemed from the Trust can, without significant delay or expense,[23] be placed on warrant and delivered in settlement of LME activity. In the Sponsor's view the commenters' concerns that the Trust will drive up LME settlement prices by creating a scarcity of deliverable LME-warranted copper are therefore misplaced.

Copper deposited in the Trust will be highly visible to the market. The Trust will accept copper in exchange for Shares on any business day at any permitted warehouse location, subject to the conditions described in the Registration Statement.[24] The Sponsor expects that deposited copper will come from diverse sources, including sources not previously widely known or reported to the market. Once copper is deposited into the Trust, it becomes

[21] As is also the case for Trust redemptions, a purchaser of an LME position does not have control over which LME warrant such purchaser will receive nor the brand of such specific copper backing such LME warrant, so long as it is of a brand of Grade A copper that is an acceptable delivery brand registered with the LME; however, the Sponsor's belief is that purchasers generally consider all such brands to be interchangeable with one another.

[22] See Registration Statement, at 30; Notice, at 23778.

[23] See the responses to Questions 7.1 and 7.2 in Section III below.

[24] See Registration Statement, at 45-51. Initial permitted warehouse locations would include six locations in the United States, Europe and Asia.

part of a highly transparent inventory. On each business day the Trust will publish, among other information, the identification number, brand, warehouse location, weight and date of receipt of each lot it holds – information which may not previously have been regularly available to the market, because the copper accepted into the Trust will not be registered on any exchange.[25] The Trust is therefore additive to market transparency. In this respect the Sponsor believes the Trust may tend to increase not only transparency but also liquidity in the physical market, by giving fabricators and consumers greater visibility into the pricing and location of copper inventories worldwide.

In summary, as a transparent and accessible holder of inventory that will track prices in the physical market, the Sponsor expects that the Trust will:

- Represent an efficient alternative source of immediately available copper to users in the underlying market;

- Represent a ready means by which producers and other participants who hold excess inventories can find a market or transfer copper price exposure to investors who seek copper price exposure, thereby helping to finance producer hedging and capital formation; and

- Help the copper market become more efficient and better understood by adding visibility to previously unreported areas of that market.

Increased transparency and efficiency might not be to the benefit of all market participants. For example, a metals trader that profits by exploiting informational and other market inefficiencies, or a hedge fund manager that is compensated for advising investors on a relatively opaque market, may be better off if less rather than more market information is made widely available. Overall, however, the Sponsor believes that a more efficient market benefits market participants as a whole and helps to advance the purposes of market regulation.

B. The Trust will track, and not drive, copper prices, which are largely a function of global forces of supply and demand.

The commenters argue that the Trust will cause large and volatile price movements in the underlying market as it successively pulls large quantities of copper out of, and dumps them back into, available inventory.[26] Apart from the primary error in this argument – that, as discussed above, copper is not removed from the market when it is deposited in the Trust – the Sponsor believes that the argument fundamentally misunderstands the factors that drive price and volatility in the copper market. As discussed below and in further detail in the responses to the Commission's questions, the Sponsor believes that price discovery is primarily a function of global supply and demand parameters that the Trust will not and cannot influence.

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[25] See Registration Statement, at 56-57. See also the response to Question 11.1 below.

[26] See, for example, the V&F Letter, at 1-2 ("JPM's offering initially calls for immediate removal from the market of . . . more than 30% of the copper available for immediate delivery worldwide. . . . Like all commodity squeezes and corners, this activity . . . will have the effect of enticing investors seeking quick profits to participate in an artificially inflated market. . . . However, like all bubbles, as investor demand for this product wanes, as it inevitably will, the bubble will burst, leaving in its wake a glut of physical copper that the JPM Trust will be forced to dump on the market.")

Supply and demand fundamentals independent of the Trust drive the price of copper. The Sponsor has devoted extensive analysis to the fundamentals of the physical copper market, as further described in the responses to Questions 1 through 3 in Section III below. In the Sponsor's analysis, the main determinants of price in the copper market are production and demand fundamentals such as demand expectations, mine and refinery capacity, marginal costs of production (and in particular the change in marginal costs of production at different production levels), global and regional industrial growth patterns, the cost of financing, and inventory levels.

For example, when demand is expected to grow faster than production, the price of copper increases and incentivizes a supply and demand response. This is illustrated in Annex A-1, which shows the historical real prices of copper relative to historical infrastructure- and manufacturing-intensive periods. Annexes A-2 and A-3 show an orderly relationship in the evolution of long-dated (60-month) LME copper prices and the total liabilities of publicly traded companies (i.e., liabilities recognized for capital expenditure projects) at the 95th percentile of production cost (i.e., those that have the highest production costs and are therefore most sensitive to price). This orderly relationship exists because marginal projects are very capital intensive, requiring significant financing from banks who require a large portion of expected revenues to be hedged. This leads to price discovery and, indirectly, capital formation. The Sponsor believes these exhibits are evidence that copper prices over the past decade have been fundamental and fair. Importantly, this framework shows that investor-financed producer hedging facilitates market efficiency. Note that for the group that was the marginal (high-cost) producers in 2007, total liabilities has fallen in 2009, 2010, and 2011. Annex A-4 shows that during cyclical lows for copper demand, copper prices have historically found a floor at the 90th percentile of the copper production cash cost curve, and in some cases at the 75th percentile of the production cash cost curve, providing further evidence linking copper prices to production cost.

Brownfield developments (existing mines that are re-opened or re-developed) generally entail lower capital expenditures than greenfield developments (new mines) due to generally lower technical and environmental risks, making them generally more attractive than greenfield developments to mining companies seeking to expand production. Annex A-5 shows the capital intensity of 179 copper projects that are currently in construction, likely to be developed, or possible greenfield projects over the next ten years. In some cases, lower ore grades, inadequate infrastructure, lack of access to labor, geopolitical risk and other factors may cause some brownfield developments to have similar or higher capital intensity than greenfield developments. Annex A-6 shows the capital intensity of historical and current brownfield developments. Wood Mackenzie estimates that, assuming expected demand increases of 3.5% per annum over the next decade, an estimated 4.9 million metric tons per annum (market value approximately $37.1 billion as of July 31, 2012) of new copper supply will need to come from greenfield developments (Annex A-7). Wood Mackenzie estimates that a minimum long-term copper price of $6,600 per metric ton (about 300 cents per pound) is necessary to incent and finance a normal internal rate of return (12%) for this new greenfield mine production to ensure market balance over the next decade, as shown in Annex A-8. Over time, the supply response described above results in a rebalancing in which the price of copper eventually decreases. In the context of these fundamental

market forces, the Sponsor does not believe that a vehicle holding a small fraction of worldwide production and inventory[27] would be expected to drive cash copper prices.

Similarly, the Sponsor believes that volatility in prices results when there is a major change in prevailing expectations about fundamental market parameters. Because the Sponsor believes that the Trust will not affect any of the fundamental parameters that drive supply or demand (including, as discussed above, available inventory, to the extent this is a component of supply), the Sponsor does not expect the Trust to cause volatility in the underlying copper market. Rather, the Sponsor believes that ETVs such as the Trust may have the opposite effect. Holders of ETV shares, based on changing expectations in the market, are incented to sell into rallies and buy on price dips. In this way, ETV holders' incentives and actions may tend to reduce peaks and valleys in pricing, and help to reduce volatility, all factors being equal.

The amount of copper on LME warrant is not the only, or even the primary, driver of copper prices. In their assertions that the Trust will cause high and volatile prices by diverting LME-warranted copper,[28] the commenters assume that the amount of copper inventory on LME warrant is the primary determinant of price. Putting aside that, as discussed above, the Trust will not hold warranted copper, the Sponsor disagrees with the commenters' premise that level of LME inventory is the dominant factor setting price, or even that it has a constant relationship with price level or price changes. Historical data show that copper prices have exhibited a wide range of price levels for any given amount of inventory on LME warrant, as discussed in the responses to Questions 3.2 through 3.4 in Section III below. Inventory levels do play a role in price, in the Sponsor's view, and can serve as a buffer when there is an imbalance of supply and demand. Global inventory, however, includes a great deal of copper beyond what is registered on the LME. Liquid copper inventory worldwide as of July 31, 2012 is estimated by Metal Bulletin to amount to approximately 1.8 million metric tons (approximately $13.6 billion). [29] This represents more than four times the total inventory registered on an exchange on that date (and more than 27 times the amount of copper expected to be deposited in relation to the full number of Trust Shares to be registered).

The Sponsor does not believe that ETVs have a significant impact on price or volatility. The record of other physical metal ETVs further supports the Sponsor's expectation that the Trust will not have a significant or negative impact on price or volatility in the underlying copper market.[30] In the copper market as well as in the markets for commodities underlying other physical metal ETVs, credible projections of increasing use and rising marginal production costs appear, in the Sponsor's analysis, to be the primary factor accounting for commodity price increases in recent periods. To the extent that some commenters may argue that index and exchange-traded products should not be allowed because they affect the price of underlying securities or commodities, the Sponsor would note that the claim would be no more true with respect to the Trust than with respect to any other ETV. The Sponsor also notes that as passive vehicles that are unleveraged and do not take short positions, the Trust and other ETVs do not present the

[27] See the response to Question 3.1 in Section III below.

[28] See, e.g., V&F Letter, at 2-4.

[29] See the response to Question 2.2 in Section III below.

[30] See the responses to Questions 3.5 and 9.6 in Section III below.

problematic characteristics associated with vehicles such as Amaranth Advisors LLC, the hedge fund cited by a commenter, which made bets on natural gas that were leveraged by a factor of 500-800%.[31]

The Trust cannot deliberately control or manipulate price. The Sponsor would add, in response to a commenter's claim that the Trust's purpose is deliberate manipulation,[32] that neither the Trust, nor the Sponsor through the Trust, could deliberately influence copper prices even if it sought to. The Trust is not managed; it does not take positions or buy and sell copper; it cannot place large orders that could affect the market. Rather, the size of the Trust and the amount of copper held, deposited and withdrawn depend on the separate purchase and sale decisions of a large number of independent market participants who may buy and sell Shares for a variety of purposes – investment, hedging, portfolio balancing – and whose purchase and sale decisions will depend on their unique respective objectives and circumstances. Market participants who may attempt manipulation of commodity prices – whether through shares of an ETV or otherwise – are regulated by the CFTC and other authorities as discussed in the response to Question 11.1 in Section III below.

In summary, it is the belief of the Sponsor that the Trust cannot, and will not, drive copper price and volatility. Rather, the Trust will be structured to closely but passively follow physical market prices, through the operation of price alignment mechanisms inherent in its structure and similar to those of existing physical metal ETVs[33] as described in detail in the Notice and the Registration Statement:[34]

- Shares will be issued and redeemed in Creation Units to registered broker-dealers or certain other persons that have agreed to act as Authorized Participants for the Trust;

- Creation Units will be issuable and redeemable daily in exchange for a specified amount of physical metal[35] that represents a *pro rata* share of the metal then held in the Trust;

- By permitting creation and redemption of Shares on a continuous basis pursuant to these fully disclosed protocols, the Trust will, the Sponsor believes, produce an efficient arbitrage mechanism resulting in Share prices that trade within a narrow range with the price of the physical metal held in the Trust.

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[31] See Levin Letter, at 6; CFTC Press Release, U.S. Commodity Futures Trading Commission Charges Hedge Fund Amaranth and its Former Head Energy Trader, Brian Hunter, with Attempted Manipulation of the Price of Natural Gas Futures (July 25, 2007), available at http://www.cftc.gov/PressRoom/PressReleases/pr5359-07.html.

[32] V&F Letter, at 2.

[33] Please see Annex C-4 for a summary comparison of certain terms of the Trust with SPDR Gold Trust, iShares Silver Trust and ETFS Palladium Trust.

[34] See Notice, at 30-40 and 49-51; Registration Statement, at 60-61.

[35] The Trust will only hold physical Grade A Copper, a commonly accepted form of copper cathode that conforms to the standard BS EN 1978:1998 (Cu-CATH-1) established by BSI Standards, the United Kingdom's national standards body. The standard specifies the allowed source, shape and chemical composition of the copper. Grade A Copper is traded in standardized lots of 25 metric tons on the LME and in the OTC market.

In other words, like all ETVs, the Trust is designed to be, and the Sponsor expects that it will be, a price taker and not a driver of price. This is consistent with the Trust's very limited purpose, which is not to profit from changes in copper prices but simply to provide an inexpensive and efficient means for public investors to gain exposure to copper if they seek it.[36]

C. The commenters' data contradicts their assertions.

The objective of this letter is to respond to the Commission's questions and, although the Sponsor disagrees with many of the assertions in the commenters' letters, the Sponsor does not propose to rebut the letters point by point. The Sponsor would like to note, however, that the commenters' principal claims are directly refuted by the materials that commenters themselves have submitted. For example:

- **Commenters' first principal claim** is, as discussed, that the Trust will remove inventory from the market and render it essentially unavailable for commercial use, i.e., turn it from liquid to illiquid.[37]

    - **The data furnished by the commenters, however,** specifically, the "Refined Copper Inventories in the Global Market Data & Charts" prepared by Bloomsbury Minerals Economics Ltd. (the "**BME Report**"),[38] classifies global inventories based on whether or not they are liquid. Inventories held in exchange-traded funds are characterized as "liquid stocks."[39]

    - In other words, the copper held in the Trust would be liquid inventory according to the characterization of commenters' own market expert. The result under this characterization is that the creation of the Trust is a transfer of stocks from liquid to liquid, consistent with the Sponsor's position as discussed in II.A. above.

- **Commenters' other principal claim** is, as also discussed, that LME and COMEX inventories are virtually the only source of copper for creation of Shares of the Trust, and will therefore be depleted by the Trust (with a resulting price spike, surge in price volatility, subsequent bust, and damage to the U.S. and global economy).[40]

    - **The data furnished by commenters, however**, indicates that there are substantial sources of liquid inventory outside of the LME and other exchanges, and that in fact most liquid inventory is non-LME or exchange inventory.[41]

    - The other sources of liquid inventory shown in the commenters' exhibit include, among others, "abnormal country stocks," which are "mainly non-bonded merchant

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[36] See Registration Statement, at 3.

[37] E.g., V&F Letter, at 1.

[38] Exhibit A to V&F Letter II.

[39] BME Report, Table 3.

[40] E.g., V&F Letter, at 1-2.

[41] BME Report, Table 3. Although the Sponsor agrees with BME Report that most liquid, immediately available inventory is not LME- or other exchange-registered, the Sponsor believes, based on the Wood Mackenzie and Metal Bulletin data discussed in detail below (which are substantially similar to one another), that the amount of liquid non-exchange registered inventory is actually considerably higher than reported by the BME Report. See the responses to Questions 2.2 and 5.1 in Section III below.

> stocks and excess stocks at producers and consumers."[42] The exhibit makes clear that these stocks are in excess of and in addition to producers' and consumers' working capital stocks for ongoing operations (which the report characterizes separately).[43]

The Sponsor believes that trading houses and other lightly regulated investment companies are by definition in the business of trading in liquid, non-exchange-registered inventories such as the excess producer and consumer stocks reflected in the commenters' exhibit. The Trust will provide shareholders the ability to obtain economic exposure to copper (and simultaneously to help provide capital to producers and others with excess inventory) through a vehicle that is more transparent, more liquid and, the Sponsor believes, will be lower in cost than the alternatives mentioned above.

[42] BME Report, footnote to Table 3.

[43] BME Report, Table 3, row caption "Working & Transit Stocks."

III. Detailed Responses to the Questions in the Order

The specific questions in the Order are repeated and addressed below:

Question 1: In light of the comments received, the Commission is soliciting further comments regarding copper usage and supply trends. For example:

1.1 What was the world mine production capacity in each of the past 10 years? What data is available[44] regarding projected world mine production over the next 3 to 5 years? What factors impact the ability to increase or decrease mine production?

Please refer to Annex A-9. Wood Mackenzie data show that global mine production has increased from 13.7 million metric tons in 2001 to 16.2 million metric tons (approximately $122.8 billion) in 2011[45] (an average increase of 1.7% per year). Wood Mackenzie projects that mine production is expected to grow by about 3.7% per year between 2011 and 2017.

The Sponsor believes that the primary factors that impact the ability to increase or decrease mine production include the mining company's cost of capital and operating costs, the level of required capital expenditure, the projected life of the mine, profit margins based on the cost of recovered materials and received prices, environmental and community relations expenses, equipment and infrastructure costs, and quality of the ore grades. Currency movements[46] and by-product credits can also impact a mine's cost of production. Additionally, there may be disruptions to supply due to temporary closures, strikes or interruptions in access to power, water or labor. Price and market-related conditions also impact realized supply and may delay the capital expenditure necessary to fund mine expansions. The Sponsor believes that when demand is expected to grow faster than production, leading to higher copper prices, mining companies will be incentivized to increase mine capacity and mine production. Simultaneously, in respect of demand, price increases may lead to increased use of copper scrap or substitution of other products for copper. Scrap use and substitution release refined copper supply to market participants, helping to moderate price appreciation by increasing immediately available supplies.

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[44] The Sponsor has relied on three industry experts for the market data used herein, Wood Mackenzie, Metal Bulletin Research and Thomson Reuters GFMS ("**GFMS**"), each of which is a leading provider of information about the world's metals industries and has provided such data to the Sponsor for a subscription fee. The Sponsor believes that the numbers reported by the three services tend to be similar to one another, but each offers different areas of detail. The Sponsor recognizes that there may be other sources of market data available that relate to the questions in the Order. Further information on Wood MacKenzie is available at: http://www.woodmacresearch.com/cgi-bin/wmprod/portal/energy/portalup/index.jsp?BV_SessionID=F27D353ECB2695F2EA1FDC8A7717870C.wmprod-02-node1&BV_EngineID=no-engine. Metal Bulletin Research is the research arm of Metal Bulletin Ltd., the Trust's Valuation Agent. Further information on GFMS is available at: http://www.gfms.co.uk/?page_id=161.

[45] Throughout this letter, unless otherwise indicated, "metric tons of copper" refers to metric tons of refined copper, with approximate market value (excluding any locational premium) indicated based on a July 31, 2012 LME cash price of $7,581 per metric ton.

[46] Because copper mine projects often use imported materials and sell to international customers, currency exchanges rates can impact mine production costs and revenues.

1.2 What was the refined production in each of the past 10 years? How much of the refined production was from primary and secondary sources? What was the world refinery capacity in each of the past 10 years? What data is available regarding projected refined production over the next 3 to 5 years? What factors impact the ability to increase or decrease refinery production?

Please refer to Annex A-10. Wood Mackenzie data show that global refined production has grown from 15.7 million metric tons in 2001 to 19.7 million metric tons (approximately $149.3 billion) in 2011. During that period, between 91% and 94% of refined production was from primary sources with the remainder being from secondary sources. Over the next three to five years, Wood Mackenzie estimates that global refined production will rise above 25 million metric tons (approximately $189.5 billion). According to Wood Mackenzie, global refined copper production capacity grew from 18 million metric tons in 2001 to 25 million metric tons (approximately $189.5 billion) in 2011, as indicated in Annex A-11.

The Sponsor believes that the primary factors that impact the ability to increase or decrease refinery production include access to and the cost of obtaining financing and capital, access to and the price of raw materials, the availability and cost of scrap, the cost of labor and power, and the price of refined copper. The Sponsor believes that it is impossible to perfectly align investment and consumption cycles due to uncertainty of demand, technological change, and substitution effects. Unavoidably, the Sponsor believes, this reality creates risk. The Sponsor notes that the commenters correctly point out that capacity growth is relatively inelastic, given the factors listed above. However, the Sponsor believes that it is important to understand capacity growth is not totally inelastic, and, in fact, refinery capacity utilization does change in response to price. For example, Wood Mackenzie estimates that the global refined copper capacity utilization rate will be 81% in 2012, then 86% in 2013 and 90% in 2014, rising in response to price. Rising capacity utilization rates are, by definition, evidence of elasticity.

1.3 What was the world refined usage in each of the past 10 years? What data is available regarding projected usage over the next 3 to 5 years?

Please refer to Annex A-12. According to Wood Mackenzie, global refined copper use has grown from 14.7 million metric tons in 2001 to 19.8 million metric tons (approximately $150.1 billion) in 2011. Wood Mackenzie estimates that the size of global refined copper consumption will rise to 23.5 million metric tons (approximately $178.2 billion) by 2015, driven substantially by China's increasing demand for copper as China builds out its infrastructure, power and housing sectors. The Sponsor notes that similarly, it believes that India is in the very early stages of its copper intensity, and it is expected to increase consumption, likely driving per capita demand for refined copper higher (Annex A-13). At the same time, refined copper use in the more mature economies of the United States, Western Europe and Japan has remained steady or in a downtrend, as indicated in Annex A-14.

The Sponsor believes that understanding China's fundamental copper supply and demand balance is critical to analyzing trade flows and fundamentally-driven price formation. As shown in Annex A-15, Wood Mackenzie data show that China's share of global refined copper production grew from 9.7% in 2001 to 26.4% in 2011. Wood Mackenzie expects China's share of global refined production to increase to 31% by 2015. Annex A-16 shows that China's share of global refined copper consumption has increased from 15.1% in 2001 to 39.3% in 2011, according to Wood Mackenzie data. Wood Mackenzie expects China's share of global refined consumption will increase to 43.4% by 2015. This share makes China the world's single largest user and consumer of refined copper. The same data show that China's net imports of refined copper have averaged 36% of domestic refined use over the past 5 years, as shown in Annex A-17,

making China's imports alone larger than the total output of most major producing countries, including the United States . These are large and structural changes that are fundamentally changing the relative market positioning of all producers and consumers in the world. For reference, according to data from the World Bureau of Metals Statistics (WBMS), the world's next largest producer of refined copper is Chile, with a 15.8% share of global production, and the next largest user of refined copper is the United States, which has a 9.2% share of global consumption. According to Wood Mackenzie, the projected shortfall in copper concentrate availability relative to future smelter demand has incentivized some primary smelting companies to announce projects that utilize scrap as the main feedstock. The Sponsor notes that most of these smelters will be located in China.

In addition, please refer to the response to Question 2.1, which discusses certain drivers of demand and the impact of prices on substitution levels.

1.4 How much copper has been held for investment purposes over the past 10 years? How much of this copper was taken off LME warrant? How much of this copper has been eligible to be placed on LME warrant?

The Sponsor notes initially that any holding of physical copper inventories, or of a financial replicating position, is implicitly an investment in copper. For example, a manufacturer or fabricator that purchases more inventory than immediately needed because such manufacturer or fabricator expects copper prices to increase is in effect buying and holding for an investment purpose.

More broadly, whenever there are above-ground inventories of physical commodities (not only copper), some party must invest its resources in owning the copper during the period between when it is produced and when it is used. Producers and consumers sometimes perform this role but may not wish to devote substantial resources to holding inventories. More commonly, merchant traders and financial institutions are incentivized by spot and forward prices to acquire and thereby finance inventories. As another example, hedge funds, merchant traders and financial institutions generally hedge their positions by selling forward or future positions in the market. The opposite side of these forward or future positions is taken by other market participants who seek to take the price exposure. The Sponsor believes that all of these activities can be viewed as having been undertaken for an "investment purpose."

The market for physical metal ETVs is essentially a variation of the foregoing model that enables retail and institutional investors to help carry the cost of above-ground inventories and at the same time to achieve financial exposure to physical commodities. An Authorized Participant will not create shares of an ETV unless there exists both (i) on one side, a producer, consumer, merchant trader, financial institution or other physical metal market participant that has physical metal but does not wish to finance or to be exposed to further price changes in that metal and (ii) on the other side, a participant in the securities market that wants exposure to price changes in the physical metal.

Copper that is held for investment purposes would include:

(1) Copper inventories on the LME, the Shanghai Futures Exchange ("**SHFE**") and the Commodity Exchange, Inc. ("**COMEX**"). Annex A-18 shows listed copper inventories on the LME, SHFE and COMEX since January 2003. As of July 31, 2012, copper inventories on these three exchanges represented a combined market value of approximately $3.5 billion, comprising 248,825 metric tons on the LME (market value on

that date approximately $1.9 billion), 156,510 metric tons on SHFE (market value approximately $1.2 billion), and 48,129 metric tons on COMEX (market value approximately $365 million).

(2) Copper inventories held through ETVs, including ETFS Physical Copper Trust ("**ETFS Copper**") and db Physical Copper ETC launched by Deutsche Bank AG ("**DB Copper**"), each of which holds LME warrants for copper. Annex A-19 shows inventory in these vehicles since their creation in December 2010 and July 2011, respectively. As of July 31, 2012, these ETVs held warrants representing inventories having a combined market value of approximately $18 million, comprising 1,698 metric tons in ETFS Copper (market value on that date approximately $13 million) and 658 metric tons in DB Copper (market value on that date approximately $5 million) of copper, respectively.[47] In comparison to physical metal ETVs that hold precious metals, to date relatively little copper has been held for investment purposes through ETVs.

(3) Non-exchange-registered copper stocks as of July 31, 2012 estimated by Metal Bulletin at 3.6 million metric tons (approximately $27.3 billion), as discussed below in the response to Question 2.2. Of this, an estimated 100 thousand metric tons (market value as of July 31, 2012 approximately $758 million) were held by hedge funds and private investors in private warehousing arrangements.[48] The Sponsor believes that an investor facing a standard 2% management fee and 20% performance fee arrangement (excluding warehousing costs) to receive copper exposure through a hedge fund, at the fund manager's discretion, versus a substantially lower fee paid to the Sponsor (as specified in the Registration Statement) to receive copper exposure through an ETV, at the investor's discretion, all else equal, would be likely to prefer the latter.

The growing interest in investments that provide a return linked to physical copper has been evidenced by the recent launch of the S&P GSCI Cash Copper Index. As noted by S&P, the new index is "specifically designed for physically-backed investments" and "designed to simulate the return of a physical copper holding without exposing investors to the roll return associated with trading futures contracts" – which is a perennial concern for investors in futures-based ETVs and a major benefit of investing in physical metal ETVs.[49]

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[47] Benchmark commodity indices, such as the S&P GSCI Index and DJ-UBS Commodity Index, include risk exposure to LME or COMEX copper futures prices, but critically, the Sponsor would note, never take delivery of physical inventories. As shown in Annex A-20, the notional value of the copper risk component for instruments linked to these two indices was $10.4 billion in 2011. For reference, the Sponsor calculates that it would take an estimated 1.2 million metric tons in the physical copper market to match this risk exposure.

[48] See Annex C-5.

[49] The Sponsor is not aware of any physical metal ETVs that hold non-warranted metal, as is contemplated by the Trust. However, some copper producers have used copper as a general financing instrument by setting up asset-backed special purpose vehicles ("**SPVs**") that issue notes secured by the producers' metal stocks. Glencore AG sponsored one such vehicle, Arth Capital Corp., in 2003. The vehicle issued $750 million in commercial paper backed by a combination of warranted and non-warranted metal, including up to 131 thousand metric tons of copper (approximately $993.1 million). In a more recent transaction that may be viewed as acquiring copper for investment purposes, a hedge fund operated by RK Capital LLC provided a $40 million loan facility to a mine exploration and development company, Curis Resources Ltd., and in connection therewith entered into an "off-take" agreement whereby Curis would sell between 25-30% of its LME-grade copper cathode production to the hedge fund at a price based on the LME market price. (This copper, it might be noted, could be used to create Shares of the Trust.) Curis Finalizes $40 Million Loan Facility And Copper Off-Take Agreement

While all of the foregoing transactions are structured differently from the Trust, they serve the same function: to permit the transfer of economic risk and financing risk, and the potential for gain or loss, from participants in the physical copper market who don't want it, to investors who do. The Trust, however, will do so in a transparent, efficient manner that is open to scrutiny by the market and subject to regulatory oversight (including by the SEC and NYSE Arca and, as discussed in the response to Question 11.1 below, the CFTC and the LME).

The Sponsor notes that it is not definitively known what proportion of the total stock levels can be potentially utilized for an LME warrant. However, Metal Bulletin (see Annex C-5) estimates such stocks to be 2.9 million metric tons as of July 31, 2012. Annex C-1 illustrates that 67.6% of total refinery production for the calendar year ended 2011 (including refined copper production from scrap) was produced as an LME approved brand.

Question 2: According to the International Copper Study Group ("ICSG"), world refined usage of copper exceeded world refined production by approximately 417,000 tons in 2010 and 231,000 tons in 2011, and world refined stocks decreased by 161,000 tons in 2010 and increased by 13,000 tons in 2011.

2.1 What factors account for refined stocks decreasing less than the deficit amount (or even increasing) in 2010 and 2011? Are there any factors with respect to the supply of copper available for immediate delivery that the Commission should consider in evaluating the market's ability to meet demand for copper? When a deficit occurs, are copper fabricators and other end users able to access copper to meet excess demand? If so, what are the sources of that copper?

As of August 23, 2012, the ICSG website publication "World Copper Factbook 2012"[50]shows that the global refined copper market was in a deficit of 358 thousand metric tons (as opposed to 417 thousand metric tons). Similarly, another ICSG publication, "World Refined Copper Production and Usage Trends,"[51] shows that in 2010 the global refined copper balance was in a deficit of 427 thousand metric tons (as opposed to 417 thousand metric tons) and world refined stocks decreased by 177 thousand metric tons (as opposed to 161 thousand metric tons). Yet another ICSG publication, "Copper Market Forecast 2012-2013,"[52] which was published on April 30, 2012, estimates that the global refined copper balance in 2011 was in a deficit of 235 thousand metric tons (as opposed to 231 thousand metric tons). The ICSG is one of many industry organizations and market participants that maintain and publish supply, demand and inventory estimates for the refined copper market. The Sponsor notes that in all cases, these varying estimates reflect the creators' expectations of the condition of the world at any given point in time; the Sponsor does not have particular insight into the workings of the ICSG refined copper model, but notes that any model showing a 417 thousand metric ton global deficit in balance should show a corresponding decline in total inventory and any "missing" amount in a balance table is likely evidence that the model's survey of inventory is incomplete. For reference, the data from industry expert Wood Mackenzie show global refined copper inventories decreased by 348 thousand metric tons in 2010 and by 111 thousand metric tons in 2011. These amounts

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With Red Kite (press release, May 9, 2012), *available at:* http://www.reuters.com/finance/stocks/CUV.TO/key-developments/article/2537471.

[50] Available at http://www.icsg.org; see p. 54.

[51] Available at http://www.icsg.org/index.php?option=com_content&task=view&id=57&Itemid=60.

[52] Available at http://www.icsg.org/images/stories/pdfs/icsg_press_release_-_2012_04__forecast.pdf.

match Wood Mackenzie's estimates of market balance deficits for those years, as shown in Annex A-21.

Fundamental factors that impact the global refined copper balance and inventory levels include off-exchange, unsurveyed or non-reported copper inventories (see Annex A-22), scrap use, and substitution effects. The Sponsor notes that scrap supply is an important factor as it relates to the market's ability to meet demand for copper available for immediate delivery. As shown in Annex A-23, scrap recovery is very responsive to price, and helps to moderate price appreciation by increasing immediately available supply. For reference, the copper content of automobiles currently in operation globally is alone equal to more than 16 million metric tons (approximately $121.3 billion), or about 80% of annual refined production. The Sponsor notes that the average life of copper in transportation use is ten years and copper is recovered from automobiles at the end of their life cycles. Copper is also recycled from a wide array of other industrial products and represents a large share of supply in the developed economies (see Annex A-24).

Structural substitution away from copper has been averaging about 2% to 3% per year (about 400 thousand metric tons (approximately $3 billion), with more than half of that loss being to aluminum on price competition, according to Wood Mackenzie. This quantity of copper supply is released to market participants for use. As discussed further in the response to Question 10.2, the Sponsor currently expects that the value of the initial Shares issued by the Trust will not exceed $75 million, which corresponds to approximately 9,893 metric tons of copper, which is equal to approximately 2.5% of the annual substitution away from copper. Annex A-25 illustrates that substitution away from copper increases as copper prices rise.

2.2 How much copper is available for immediate delivery that is not on LME warrant?

The table below summarizes refined copper stock estimates as of July 31, 2012 from Metal Bulletin (see Annex C-5):

	LME branded stocks	Non-LME branded stocks	Total stocks
Liquid stocks	1.4 million metric tons	425 thousand metric tons	1.8 million metric tons
Illiquid stocks	1.6 million metric tons	737 thousand metric tons	2.3 million metric tons
Total Stocks	2.9 million metric tons	1.2 million metric tons	4.1 million metric tons

- Total refined copper stocks available for immediate delivery and considered to be an LME brand is approximately 1.4 million metric tons (approximately $10.3 billion). This breaks down further as:
    - Total stocks registered as exchange stocks are 385 thousand metric tons[53] (approximately $2.9 billion). Of this amount, 249 thousand metric tons

[53] Metal Bulletin estimates that only 385 thousand metric tons of the 449 thousand metric tons of exchange-registered refined copper stocks are LME brands. The difference of 64 thousand metric tons was already excluded in its calculation of the 1.36 million metric tons that is considered liquid and LME-brand.

(approximately $1.9 billion) is already registered as an LME warrant, and, therefore, the difference of 136 thousand metric tons (approximately $1 billion) is registered on other exchanges.

- o Total stocks not registered on any exchange are 973 thousand metric tons (approximately $7.4 billion).

- As noted below in the response to Questions 7.1 and 7.2, the Sponsor does not believe that the current LME warranted stocks are available for immediate use in respect of creating Shares in the Trust.

In addition, the Sponsor notes that Metal Bulletin currently estimates there to be 1.1 million metric tons (approximately $8.3 billion) of copper concentrate and 2.1 million metric tons (approximately $15.9 billion) of copper blister currently within the smelting and refining process that will be shortly available for immediate delivery. Additionally, 19.7 million metric tons (approximately $149.3 billion) were produced in 2011 and such production is estimated to grow to 21.13 million metric tons (approximately $160.2 billion) in 2012.

As discussed further in the response to Question 10.2, the Sponsor currently expects that the value of the initial Shares issued by the Trust will not exceed $75 million, which corresponds to approximately 9,893 metric tons, or approximately 396 lots of copper (using only the LME cash settlement price as of July 31, 2012). The following table compares, in metric tons and as a percentage, the total stocks of refined copper and the total stocks not on LME warrant and available for immediate use for purposes of executing creation orders for the Trust to the size of the initial creation expected by the Sponsor and the amount of Shares registered by the Trust (based on the price of copper as of July 31, 2012):

Total Stocks (metric tons)	**Total Stocks Available for Trust (metric tons)**	**Initial Creation (metric tons)**	**Initial Creation (percentage relative to Total Stocks and Stocks Available to the Trust)**	**Amount Registered (metric tons)**	**Amount Registered (percentage relative to Total Stocks and Stocks Available to the Trust)**
4,088,347		9,893	0.242%	65,953	1.613%
	973,214	9.893	1.017%	65,953	6.777%

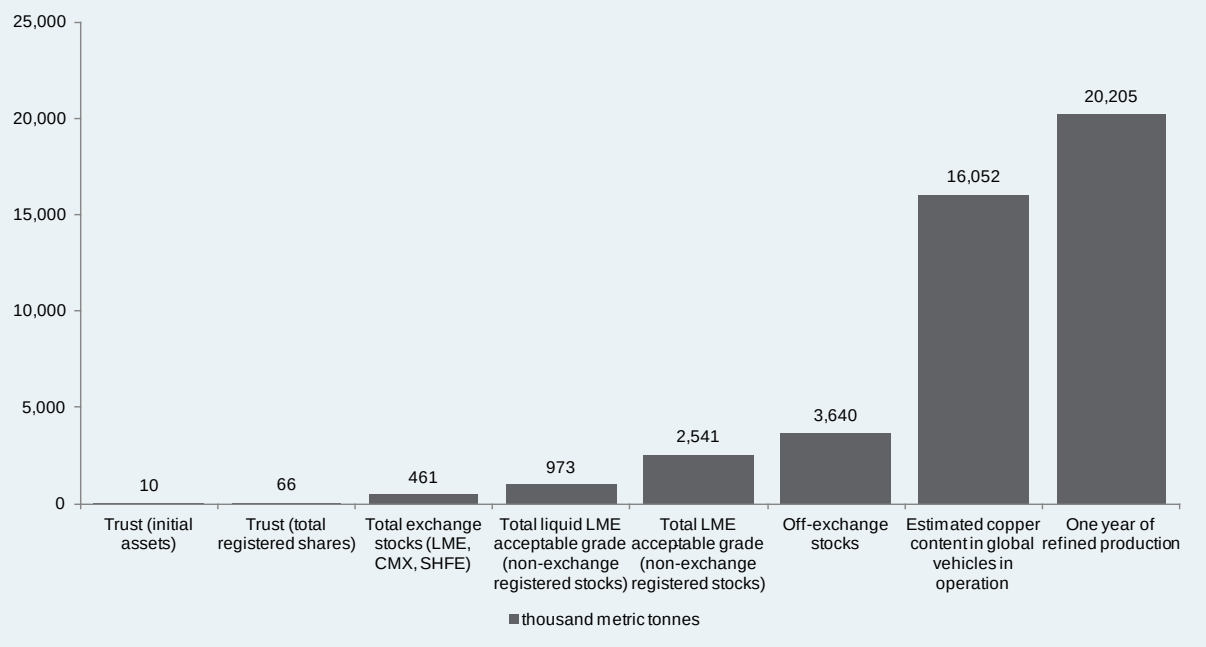
Please also see the response to Questions 7.1 and 7.2 below for a discussion of the mechanics of placing copper on-warrant and taking copper off-warrant.

Question 3: The Commenters state that a material reduction in the supply of copper available for immediate delivery will increase the price of copper and volatility in the copper market, and, in turn, would harm the U.S. economy. The Commission requests comment on whether commenters agree or disagree with these concerns, and why or why not. For example:

3.1 Do commenters believe creation of the Trust will have an impact on the supply of copper? If so, what will that impact be? If not, why not?

The Sponsor expects that the Trust, like other existing physical metal grantor trust products, will not have a material impact on the supply of copper. As discussed in part A of the Executive Summary above, the Trust is not a consumer of copper; rather, the Trust is merely a vehicle for holding copper. Copper deposited in the Trust is available for withdrawal in accordance with the procedures set forth in the Registration Statement on any business day by any Authorized Participant. In addition, the Trust has been structured to be as flexible as possible with regard to U.S. broker/dealers being an Authorized Participant of the Trust.

Notwithstanding the foregoing, the Sponsor would not expect that the Trust would represent more than a small fraction of the global market for copper. The Sponsor believes the following graph (which is reproduced in Annex A-26), which shows the relative size of the Trust (at $75 million or $500 million in assets), may be informative:[54]



3.2 How does a change in the supply of copper impact the price of copper? To what extent do copper stocks need to be reduced or increased to impact the price of copper?

The price impact of a change in supply is not a constant, either in dollars per metric ton or in respect of percentage. Rather, it varies significantly by stage of the global business cycle and between business cycles. Even within a stable pricing regime, there is substantial variation in

[54] Please refer to Annex A-23.

apparent price impact around central tendencies. Variation is ineffaceable because a change in copper supply is only one of many factors affecting copper prices and will have a price impact only in relation to other factors, and in particular, physical demand. For example, a one-percent increase in global production growth will tend to have less of a price effect when it is drawn from a low-cost producing region to meet soft demand growth. Conversely, a one-percent increase in global production growth will tend to have a greater price effect when it is drawn from a high-cost producing region to meet strong demand growth in a tight environment for capacity utilization (i.e., where there is no other supply alternative for production growth). Thus, the Sponsor believes that any analysis of the effect of supply growth on price must address the actual and expected cost of such production, as well as actual and projected demand. It is not uncommon for copper producers, like other metal producers, to experience unexpected cost overruns due to raw material price inflation, labor shortages, transportation bottlenecks, operational challenges in the mine pit, environmental compliance costs, insurance charges, production disappointments on ore grade and accidents, or natural factors such as lower or higher than expected values for rainfall and temperature, or natural disasters such as earthquakes, hurricanes, mudslides or blizzards. The influence of any given fundamental factor on price varies over time, sometimes in generally predictable ways through business cycle analysis, but often in unpredictable ways.

The result of no change in stocks, by itself, could either decrease or increase price, as this outcome may provide information about weaker-than-expected supply or stronger-than-expected demand, for example. Prices could also move on no stock change due to changes in cost structures for production, transportation, or storage (and in particular as a result of changes in interest rates). Prices could change, despite stationary supply conditions, on acts of terrorism or force majeure events, which would change near- to medium-term risks. Importantly, the Sponsor believes a distinction must be made on whether a change in stocks represents current or expected future use by the current owner of inventory, or simply a movement in geographical location or ownership of those stocks. An investor provides more general supply flexibility for resolving future physical market tightness, as the only way such investor can monetize its risk is by releasing its inventory to the market at a price. A consumer can and will withhold inventory for its own future use, limiting its accessibility to the market. Thus, the economic purpose of the investor's presence in the market is to more finely calibrate risks to future demand and how they are met via supply.

Please see Annexes A-27 through A-30. Empirical analysis shows that inventory alone cannot provide a definitive answer regarding either the size of a price change or the direction of a price change. In the annexes referenced above, the Sponsor examines historical data to show the relationships between copper inventories and prices. The analysis is robust, examining both exchange stocks and total stocks, nominal prices and real prices, and inventories expressed in levels and in days of global use. The Sponsor segregates changes in inventory levels into four regimes to chart the typical progression of pricing in the global copper market through the business cycle: (1) normal and falling, (2) low and falling, (3) low and rising, and (4) normal and rising. The Sponsor also examines a fifth regime, representing the copper market from July 2009 through the present, which represents the current business cycle. The data show that even in a low-stocks environment (defined as less than 180 thousand metric tons or less than 7 days of global use coverage), prices range from among the highest to some of the lowest of the past few decades. This finding holds true regardless of whether the analysis is based on global copper inventories, total LME copper inventories, or just on-warrant LME copper inventories. It is important to acknowledge and understand that copper prices can and do rise as inventories rise, and vice versa.

3.3 To what extent is the LME Settlement Price affected by the amount of copper on LME warrant? To what extent must copper on LME warrant be reduced to impact the LME Settlement Price? To what extent, if at all, is the LME Settlement Price affected by the supply of copper ineligible to be placed on LME warrant?

Please see Annexes A-31 through A-32 and the response to Question 3.2 above. The Sponsor notes that copper cash prices are not only determined by changes in on-warrant LME copper stocks. Historically, when on-warrant LME copper stocks are in what the Sponsor's analysis identifies as the "normal" regime, prices have both reached the highest level and been among the lowest levels. A similar pattern is evident in a low stocks environment. The Sponsor notes that copper inventories and prices do not always have an inverse relationship, which the Sponsor believes is an important fact not properly reflected in the commenters' submissions.

The Sponsor notes that in the first half of 2009, for example, both cash copper prices and total LME inventories rose significantly. This price movement was largely driven by Chinese imports, which doubled from their prior level, as Chinese merchants and users secured what they perceived to be inexpensively priced metal in anticipation of future physical use. China's imports of unwrought copper increased from an average of 147 thousand metric tons per month (approximately $1.1 billion per month) in the second half of 2008 to an average of 315 thousand metric tons per month (approximately $2.4 billion per month) in the first half of 2009. For the 12 months ended June 2012, China imported 4.2 million metric tons with an estimated dollar value of $31.8 billion (see Annex A-33). Meanwhile, the Sponsor's information indicates that the weak demand for contemporaneous physical use during the recession led to builds in LME inventories.

In addition, please see the response to Question 3.2, in which the Sponsor demonstrates empirically using LME data that these results hold even when examining global copper stocks, total LME stocks, or on-warrant LME stocks, or in nominal or real price terms.

The Sponsor notes that the commenters assert that it would be an unusual event if the Trust sourced approximately 10,000 metric tons from the LME (an amount equal to approximately 5% of current LME on-warrant stocks).[55] The Sponsor contends, however, that, based on 5-day moving windows since November 2001 (the start of the current copper super-cycle), 5-day changes (up or down) sized 10,000 metric tons or greater have occurred approximately 29% of the time, according to the Sponsor's analysis of LME data. In terms of share, 5% of the current on-warrant LME stock (249 thousand metric tons). Further, 5% changes (up or down) over 5-day windows have occurred approximately 26% of the time. Even if Authorized Participants did use copper backing LME warrants for the purposes of creating Trust Shares, which the Sponsor does not believe is likely under current market circumstances, the Sponsor notes that inventory builds or withdrawals equivalent to copper required for the initial creation unit of Shares currently occurs at LME at least one quarter of the time.

3.4 How does a change in the supply of copper impact volatility in the physical copper and copper derivatives markets?

Please see Annexes A-34 through A-38 and the responses to Questions 3.2 and 3.3. Changes in realized volatility of physical copper prices and prices of copper derivatives based on changes in global copper supply are not constants. The historical data show that the highest volatility of copper prices occurred when global copper inventories totaled close to 3 million metric tons

[55] V&F Letter 11, at 7-8.

(approximately $22.7 billion), which is on the higher end of the historical normal pricing regime. LME prices and price volatility do not increase or decrease based solely on LME copper stocks or on-warrant LME copper stocks. In general, realized volatility of copper prices tends to be higher in a lower stocks environment, as strong physical demand draws production and distribution systems to full capacity utilization. In such an environment, the Sponsor believes that a vehicle such as the Trust, both as (i) a store of potentially willing sellers of inventory, and (ii) as a mechanism that will improve transparency of overall stock levels, would help alleviate such environments.

3.5 Is there empirical evidence that creation of the Trust will impact copper prices and volatility? What impact, if any, will creation of the Trust have on the US economy?

The Sponsor does not expect that the Trust will have a material impact on copper prices or volatility. As discussed in the introduction to Part II of this letter and in the response to Question 3.1, the Trust is not a consumer of copper; rather, the Trust is merely a vehicle for holding copper, which can easily be obtained at little cost to the redeeming Authorized Participant or its client. Nothing about the structure of the Trust can be expected to implicate the factors that lead to increased volatility, which are discussed in the response to Question 3.4. The Sponsor is also not aware of any increase in copper prices or volatility resulting from the launch of ETFS Copper or DB Copper. The Sponsor is not aware of any empirical evidence to suggest that the physical platinum and palladium ETVs, both of which hold industrial metals, have affected the prices or the volatility of the underlying metals.

Due to the Trust's creation and redemption mechanism, which should cause the price of Shares in the secondary market to track closely the price of the Trust's copper, and the related ability of Authorized Participants to exchange Shares for physical copper that can be used by manufacturers, fabricators and other physical market participants, the Sponsor believes that the Trust, like existing physical metal ETVs, will be a passive vehicle that tracks, rather than drives, the price of copper.

Buyers and sellers on the LME (and other exchanges that trade copper) can also redeem Shares of the Trust in exchange for the underlying copper. These market participants can then undertake the standard practice of (1) exchanging the redeemed metal for metal in an LME Warehouse Location and then creating LME warrants or (2) directly creating LME warrants from the underlying copper delivered by the Trust.

Overall, the Sponsor expects the impact of the Trust on the U.S. economy to be positive, insofar as it presents a transparent, efficient structure through which investors will be able to invest in copper. In addition, because the Sponsor expects that it is unlikely that LME warrants will be cancelled in order to be utilized for the creation of shares, and rather that non-exchange-registered stocks are the more likely source, such reporting by the Trust of the size, location and pricing of such copper gives the market more transparency of the overall market stocks, which would be positive to industry and participants generally. See the response to Questions 7.1 and 7.2 for a discussion regarding the reasons for which it is unlikely that the Trust will hold LME warranted copper.

Question 4: V&F and Senator Levin state that the Trust and the proposed iShares Copper Trust, collectively, will remove from the market a substantial percentage of the copper available for immediate delivery, with Senator Levin stating that the Copper Trusts would hold approximately 34% of the copper stocks available for immediate delivery and would remove from the U.S. market over 55% of the available copper. V&F further states that the collective effect of the Trust and the iShares Copper Trust would be "far-reaching and potentially devastating to the U.S. and world economies," including "shortages of copper, higher prices to consumers, and increased volatility."

4.1 Do commenters agree or disagree with these statements? If so, why or why not?

The Sponsor disagrees with these statements. As discussed in the Part II of this letter and in the response to Question 3.1, the Trust is merely a vehicle for holding and transferring copper. A manufacturer or fabricator that requires physical copper can purchase one or more Creation Units of Shares on the Exchange and submit such Creation Units of Shares to an Authorized Participant for redemption with the agreement of the Authorized Participant to trade the physical copper received, as commonly happens with existing physical metal ETVs.

As stated in the Registration Statement and the Notice, the Trust cannot accept LME warrants or any exchange-registered stocks. The Trust will only accept physical copper of the appropriate grade and location. The Sponsor expects that (as explained further in responses to Questions 7.1 and 7.2), based on current prices and levels, commercially rational Authorized Participants are unlikely to involve copper that has been taken off-warrant for such purpose.

The Sponsor also believes that the commenters inaccurately interpreted the objective of the Trust. Because the Trust does not consume stocks, even in a scenario in which the size of the Trust grows, the actual level of stock within the marketplace (and available to the market) does not change. The empirical data gathered (and further described in the responses to Questions 3.2 and 3.3) show that the market price is, over time, predominately affected by changes in expectations of future production and demand, such that the price movements are a function of the marginal cost of production required to maintain balance between production and demand. Short-term price fluctuations can occur when there is a sudden change in expected supply, depending on the market's probability-weighted expectation of supply disruptions and the duration and size of such disruptions. This last consideration, the Sponsor believes, is dependent on the overall size of above-ground inventories and the market participants' understanding of them. Because the Trust will not be consuming the stocks, the Sponsor believes there will be no such impact on the market.

As discussed below in response to Questions 6.1, 7.1 and 7.2, the initial Creation Units are not expected to be acquired using copper that has been taken off-warrant for such purpose. The Sponsor also notes that the copper held by the Trust may not even be located in the United States. In fact, based on its current supply and price, if the Trust was launched today, the Sponsor believes the initial Creation Units would likely be acquired by the initial purchaser of Shares (an affiliate of the Sponsor) using copper located in Shanghai.

The commenters' claim is that price and inventory movements are always inversely related. The historical observation is, however, not as conclusive as commenters believe it to be. The

following results summarize observations of inventory data, LME warrant data, and LME prices[56] over the last 15 years from July 1997:

- Total global copper inventory and LME copper price changes have:
    - moved in the same direction approximately 44% of the time;
    - moved in opposite directions about 55% of the time; and
    - 1% of the time, one parameter changed but the other did not.
- Total LME exchange-registered stocks (LME warrants) and LME copper price changes have:
    - moved in the same direction approximately 43% of the time;
    - moved in opposite directions about 52% of the time; and
    - 5% of the time, one parameter changed but the other did not.

FREQUENCY ANALYSIS, INDIVIDUAL DATA SERIES (JULY 23, 1997 THROUGH AUGUST 21, 2012)

	Daily Change (count of days)			Daily Change (in percent)		
	Increase	Decrease	Unchanged	Increase	Decrease	Unchanged
On Warrant LME copper stocks	1829	1823	282	46.5%	46.3%	7.2%
Total LME copper stocks	1554	2226	154	39.5%	56.6%	3.9%
LME cash copper price	1912	1872	150	48.6%	47.6%	3.8%
LME 3M copper price	1917	1838	179	48.7%	46.7%	4.6%
LME 12M copper price	1944	1828	162	49.4%	46.5%	4.1%

FREQUENCY ANALYSIS, STOCKS AND PRICE (JULY 23, 1997 THROUGH AUGUST 21, 2012)

	ON WARRANT LME STOCKS AGAINST PRICE			TOTAL LME STOCKS AGAINST PRICE		
	LME cash copper price	LME rolling 3M copper price	LME rolling 12M copper price	LME cash copper price	LME rolling 3M copper price	LME rolling 12M copper price
TOTAL COUNT	**3934**	**3934**	**3934**	**3934**	**3934**	**3934**
Both Increased	849	850	871	706	707	724
Both Decreased	835	820	819	1027	1007	1002
Same Direction	***1684***	***1670***	***1690***	***1733***	***1714***	***1726***
Different Directions	2070	2047	2058	2149	2129	2148
No Change in one, change in other	180	217	186	52	91	60
TOTAL PERCENT	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**
Both Increased	21.6%	21.6%	22.1%	17.9%	18.0%	18.4%
Both Decreased	21.2%	20.8%	20.8%	26.1%	25.6%	25.5%
Same Direction	***42.8%***	***42.5%***	***43.0%***	***44.1%***	***43.6%***	***43.9%***
Different Directions	52.6%	52.0%	52.3%	54.6%	54.1%	54.6%
No Change in one, change in other	4.6%	5.5%	4.7%	1.3%	2.3%	1.5%

* Start date of July 23, 1997 determined by LME 12M price data availability from Bloomberg. Analysis was run on August 21, 2012, determining end date.

Source: LME, Bloomberg, JP Morgan

Moreover, the Sponsor believes that the percentages cited by the commenters are calculated based on incorrect information. Commenter's letter states that "the Trust will acquire 61,800 metric tons of copper to back its initial shares." As stated in the Arca Letter, however, the Sponsor currently expects that the value of the initial Creation Units issued by the Trust will not exceed $75 million, which corresponds to approximately 9,893 metric tons, or approximately 396 lots of copper (using the LME cash settlement price as of July 31, 2012).

[56] Observations were made using LME Cash Prices, LME 3-month forward prices and LME 12-month forward prices with little noticeable difference.

The percentages in the letter are based on the number of Shares that the Trust initially proposed to register on the cover of the initial filing of its Registration Statement on October 22, 2010. At that time the Trust sought to register approximately $500 million of Shares based on the LME spot price of copper on October 7, 2010. However, the Trust would not, and never intended to, issue that number of Shares at launch. Like any other physical metal ETV, the Sponsor expects that the Trust will continuously create and redeem Shares in response to creation and redemption orders submitted by Authorized Participants. The issuance of new Shares will not necessarily cause the Trust to increase in size, to the extent that such issuances are offset by redemptions of Shares by Authorized Participants.

In addition, the Sponsor does not believe that the Trust should be aggregated with the iShares Copper Trust as the two entities are structured differently and their merits should be assessed individually.

Please also refer to the response to Question 3.5.

Question 5: V&F states that the only "visible" copper available to satisfy the Trust's requirements is copper stored in LME warehouses. NYSE Arca represents that it has been informed by the Sponsor that overall physical copper stocks, including stocks that are immediately available for sale, are substantially larger than V&F would suggest. V&F responded, arguing that the copper stocks identified in Arca's Response mainly consist of metal in the supply chain, which would not be generally available for creation of Shares. The Commission is soliciting further comments regarding physical copper stocks. For example:

A response to the questions raised by Question 5 is provided below; however, the Sponsor respectfully notes for the Commission that the Trust does not hold LME warranted copper, and the Sponsor believes that the Trust will not hold copper that has been de-warranted from the LME system. See the response to Questions 7.1 and 7.2.

5.1 How much copper is currently held in LME warehouses? How much of the copper currently held in LME warehouses is on warrant? How much copper in LME warehouses is available for investment purposes?

Please refer to Annex C-5. Copper held in an LME warehouse is not necessarily "on-warrant." LME approved warehouses can hold copper for market participants pursuant to bilateral agreements. The Sponsor is not aware of any definitive publicly available information on the amount of copper held in LME warehouses, but Metal Bulletin has estimated total refined copper stocks per country as of July 31, 2012. The total amount of copper held in all countries in which the LME has warehouses located to store copper[57] is 543 thousand metric tons (approximately $4.1 billion). This total may include stocks not stored in such warehouses, and, therefore, is better described as refined copper stocks held in "LME Countries" rather than "LME Warehouses." Of the 543 thousand metric tons, 249 thousand metric tons (approximately $1.9 billion) is reported by Metal Bulletin to be held on the LME on warrant as of July 31, 2012. Additionally, according to Metal Bulletin, 43.7 thousand metric tons (approximately $331.3 million) is held within the COMEX as exchange-registered stocks as of July 31, 2012.

[57] The current list of LME Countries defined in the section above includes Belgium, Germany, Italy, Malaysia, the Netherlands, Scandinavia (Sweden is a region with LME warehousing), Singapore, South Korea, Spain, UAE, United Kingdom, and the United States.

In addition, there is 980 thousand metric tons (approximately $7.4 billion) that has been classified as “other” by Metal Bulletin in respect of Country status. This includes producer, consumer, transit/merchant and other off-exchange stocks. The Sponsor notes that it is not clear where this is located or en-route to and, therefore, might be already located in or in the process of going to LME Countries. The Sponsor also notes that industry reports indicate that approximately 5% to 10% of annual refined production per year is produced for the spot market and is not pre-contracted in supply agreements.

Therefore, as it relates to the numbers reflected in the table below, the aggregate of 543 thousand metric tons (approximately $4.1 billion) and 980 thousand metric tons (approximately $7.4 billion), which is 1.52 million metric tons (approximately $11.5 billion), is assumed as potentially existing in LME countries. In the table below, a summary of the total balance is categorized using Metal Bulletin considerations into liquid and illiquid balances as of July 31, 2012.

Type	**Total Stocks**	**Liquid Stocks**	**Illiquid Stocks**
Producer	69.3 thousand metric tons (approximately $525.4 million)	17.3 thousand metric tons (approximately $131.2 million)	52 thousand metric tons (approximately $394.2 million)
Consumer	188.5 thousand metric tons (approximately $1.4 billion)	47.1 thousand metric tons (approximately $357.1 million)	141.4 thousand metric tons (approximately $1.1 billion)
Merchant/Transit	805.7 thousand metric tons (approximately $6.1 billion)	402.9 thousand metric tons (approximately $3.1 billion)	402.9 thousand metric tons (approximately $3.1 billion)
Exchange	292 thousand metric tons (approximately $2.2 billion)	292 thousand metric tons (approximately $2.2 billion)	N/A
Strategic Sovereign reserves	117 thousand metric tons (approximately $887 million)	N/A	117 thousand metric tons (approximately $887 million)
Other (off-exchange investor)	50 thousand metric tons (approximately $379.1 million)	50 thousand metric tons (approximately $379.1 million)	N/A

In each of the above, the definition of investment purposes, however, needs to be defined given the context of the market.

In addition, LME Exchange stocks are set forth in Annexes A-39 through A-41.

5.2 How much copper is held in COMEX, Shanghai Futures Exchange ("SHFE"), and Multi Commodity Exchange of India ("MCX") warehouses? How much copper held in COMEX, SHFE, and MCX warehouses is eligible to be placed on LME warrant (i.e., is of a brand registered with the LME)? How much of this LME warrant-eligible copper is available for investment purposes? Where is this copper located?

Please refer to Annex A-18, which indicates copper inventories on the LME, SHFE and COMEX since January 2003. The Sponsor is not aware of there being reports of copper inventories by MCX warehouses.

With respect to the amount of copper in the non-LME exchange warehouses that is eligible to put on LME warrant, COMEX registered copper is the same quality as LME (grade A copper with a purity level of 99.9935%), and, therefore, all 48,129 metric tons (approximately $365 million) would be LME-warrant eligible. Shanghai Exchange registered stocks share the equivalent purity level, and approximately 32 of the 55 Shanghai registered brands are also registered as LME brands;[58] there is no information currently available to determine the quantity of the 156,510 metric tons of copper (approximately $1.2 billion) registered on the SHFE as of July 31, 2012 that originates from these 23 non-LME-registered brands.

Please refer to Annex C-5. Metal Bulletin estimates that approximately 2.93 million metric tons (approximately $22.2 billion) of the 4.1 million metric tons of total refined copper stocks is LME-brand registered. There are approximately 2.54 million metric tons (approximately $19.3 billion) of LME-brand registered material that is not registered on any exchange.

It is likely (but not certain) that most stocks held in LME Countries (which, as discussed in the response to Question 5.1, is 1.52 million metric tons (approximately $11.5 billion)) are LME-brand registered. Additionally, the Chinese bonded warehouse stocks of 550 thousand metric tons (approximately $4.2 billion) are estimated by Metal Bulletin to be in the majority also LME acceptable metal (80%, given the imported status of such metal and arbitrage activity between the LME and SHFE exchanges). Additionally, for non-LME Countries (excluding China), total stocks are estimated by Metal Bulletin, as of July 31, 2012, to be 509 thousand metric tons (approximately $3.9 billion). Of this amount, 439 thousand metric tons (approximately $3.3 billion) are held by producers and the remainder by consumers. Metal Bulletin estimates that 68% of these balances are considered LME-brand registered.

In China (excluding the bonded stocks already discussed), there exists 1.5 million metric tons (approximately $11.4 billion). Again, Metal Bulletin estimates that 68% of these stocks are LME-brand registered.

5.3 What quantity of copper stock, if any, is held in other locations that would be eligible to be placed on LME warrant (if it were located at an LME warehouse)? How accessible are stocks of copper eligible to be placed on warrant that are not held in LME warehouses?

The response to Question 5.2 discusses how much copper could potentially be placed on LME warrant.

[58] Historically, this is because the majority of the producers do not sell their production on the global market and, therefore, have not undertaken the process of registering their brands with the LME.

Additionally, the response to Question 2.2 discusses how much of the current global refined copper stocks are estimated by Metal Bulletin to be liquid stocks currently.

Please see Annex A-22. The Sponsor notes that inventories of unwrought refined copper exist outside of exchanges. Wood Mackenzie estimates place these stocks at 2.25 million metric tons at the end of 2011 (approximately $17 billion). Off-exchange unwrought inventories have ranged from a minimum of 1.42 million metric tons (approximately $10.7 billion) in 1995 to a maximum of 3.64 million metric tons (approximately $27.6 billion) in 1984, according to Wood Mackenzie.

Notwithstanding the above, copper is a physical element. As such, all forms of copper inventories, irrespective of their source or form, can be converted into metal that can underlie an LME warrant. Such transformation is dependent on smelting and refining capacity, and the cost of such re-refining given its current form. This is particularly evident with the increased Chinese refining capacity solely utilizing scrap during recent years.

All stocks are accessible dependent upon the price environment. If the price of copper rises, non-exchange-registered inventory has been observed to move into the market. These off-exchange inventories are held by producers, consumers, and merchants in anticipation of future demand (consumers) or in anticipation of higher prices in the future (producers, merchants). In respect of consumers and fabricators, excess inventories become expensive to hold and finance in a price-rising environment as well as profitable potentially to on-sell. Scrap will also be freed for additional consumption in a rising price environment. The Sponsor believes that both of these effects will cause prices to moderate.

Notwithstanding the large quantities of potential LME stocks, the Sponsor believes that most, if not all, of the copper that will enter the Trust will not come from LME- warranted copper. See Responses to Questions 7.1 and 7.2.

5.4 Are commenters aware of any activities involving the stockpiling of copper? If so, how much copper has been stockpiled? Where is such copper located? How accessible is such copper? How much of this stock was taken off LME warrant? How much of this copper is eligible to be placed on LME warrant?

Please see Annex C-5. Metal Bulletin estimates that as of July 31, 2012, the State Reserve Bureau of China and South Korea's Public Procurement Service collectively have close to 1.1 million metric tons (approximately $8.3 billion) stored. This is broken down approximately into 950 thousand metric tons (approximately $7.2 billion) and 117 thousand metric tons (approximately $887 million) in China and South Korea, respectively.

It is estimated by Metal Bulletin that there exists stock piling of bonded warehouse stocks in Shanghai in the amount of 550 thousand metric tons (approximately $4.2 billion) as of July 31, 2012. It is estimated by Metal Bulletin that all of these stocks are liquid and accessible. Additionally, Metal Bulletin estimates that 100 thousand metric tons (approximately $758.1 million) is held by private individuals or hedge funds as of July 31, 2012, which would also be considered accessible.

Metal Bulletin estimates that approximately 80% of the 550 thousand metric tons held in bonded warehousing as of July 31, 2012 is LME-brand registered. The Sponsor notes, however, it has not confirmed whether this was sourced from the LME or in the physical market. The response to Question 5.2 estimates how much additional copper could be potentially placed on LME warrant.

The Sponsor estimates that China, as the world's largest producer of refined copper (26% of global production in 2011) and consumer of refined copper (40% of global use in 2011), has between 55% and 65% of these off-exchange unwrought inventories. These off-exchange inventories are held by producers, consumers, and merchants in anticipation of future demand (consumers) or in anticipation of higher prices in the future (producers, merchants). These inventories are held for many reasons. Consumers typically hold stocks as working capital to manage production costs over the medium term. If copper prices rise, a consumer does not have to enter the market to purchase copper at higher prices if the consumer has inventory available from which to draw. Merchant trading enterprises have evolved to hold inventories that will fluctuate depending on market conditions and such enterprise's purpose. If copper prices rise, the Sponsor expects that off-exchange stocks would likely be brought into circulation (either moved to exchange stocks or used for demand instead of exchange stocks), thereby potentially freeing up copper on exchanges. For further discussion, please refer to the response to Question 1.4.

Question 6: The Trust will store copper in warehouses that are maintained by the Warehouse-keeper. Initially, the permitted warehouse locations are in the Netherlands (Rotterdam), Singapore (Singapore), South Korea (Busan and Gwangyang), China (Shanghai), and the United States (Baltimore, Chicago, and New Orleans) (each an "Approved Warehouse" and, collectively, the "Approved Warehouses").

6.1 What is the locational premium at each of the Approved Warehouses?

Locational premia can be defined as the difference between the consideration a buyer of copper (of a particular grade held in warehouse) in a specific location is willing pay versus a market observed global benchmark price. In respect of the Trust, all such comparisons are made against the LME cash settlement price published daily by the LME. Therefore, the locational premium for a specific location (or Approved Warehouse location in the case of the Trust) is simply a component of the localized overall cost of copper to a buyer.

Please see Annex C-3, which provides historical information regarding locational premia for the Trust's Approved Warehouse locations and for related global regions for various periods since 2010. For the period from April 1, 2012 through June 30, 2012, the average locational premium as a percentage of the average physical price of copper in the Approved Warehouse locations ranged from 0.0952% in New Orleans, Chicago and Baltimore to 0.9769% in Rotterdam. The data show that these premia vary over time. As such, a region with the highest premia in one interval of time may have the lowest premia at a later date, and vice versa.

In addition, the Sponsor understands that there are limited non-exchange-registered stocks in New Orleans, Chicago and Baltimore. Metal Bulletin estimates that most western entities are holding approximately 1% of total demand as stock, which is consistent with the belief of the Sponsor. The Sponsor notes that, to minimize capital stocks in the uncertainty of the current economy, U.S. consumers are currently primarily purchasing stocks on a Carry Paid To ("**CPT**") basis (i.e., title transfer only occurs when goods are delivered to the consumer) as and when they require stocks. The Sponsor notes that the observed price that such consumers are paying is higher than the "in-warehouse" equivalent prices currently published by Metal Bulletin in Annex C-5. Stocks to satisfy such deliveries are generally held by merchant traders solely for this purpose or delivered under consignment arrangements with such merchant traders. The locational premia published by Metal Bulletin for these above-mentioned locations are then considered to be the value of LME warrants in those U.S. locations. As set forth in the responses

to Questions 7.1 and 7.2, it is the Sponsor's belief that all commercially rational Authorized Participants, given the reduced amount of immediate non-exchange-registered stocks in the United States, and the cost and time required to cancel and take delivery of copper backed by LME warrants, would purchase liquid non-exchange-registered stocks in other locations. The Sponsor believes that, under current conditions, the copper delivered to the Trust in respect of the initial creation units would not be sourced from the above-mentioned U.S. locations but rather from other locations outside of the United States with larger and more readily available and liquid stocks.

6.2 What impact would changes in locational premia have on supply and demand for copper at each of the Approved Warehouses?

The Sponsor notes that locational premia (as discussed in the response to Question 6.1), by definition, are expressed as additive to the LME cash price of copper. As a result, locational premia are a signal of the clearing of supply and demand factors specific to the local market. The Sponsor believes that changes of local premia are symptoms of changes in local supply and demand.

6.3 How much copper is held at each of the Approved Warehouses?

Please see Annexes C-1 and C-5.

As discussed in the response to Question 5.1, a total of 1.52 million metric tons (approximately $11.5 billion) is shown to be in LME Countries. In addition, there is estimated to be 550 thousand metric tons (approximately $4.2 billion) in bonded warehousing in Shanghai. These bonded warehouse stocks are available for the purpose of creating Trust Shares.

Additionally, stocks in China (excluding strategic stocks and bonded warehouse stocks) are estimated to be 556.5 thousand metric tons (approximately $4.2 billion). A portion of this "on-shore" amount could be potentially brought off-shore into bonded warehousing assuming the pricing differential incentivized such action (given the tariff costs of exporting copper from China).

6.4 How much of the copper held at each of the Approved Warehouses is on LME warrant?

Please see Annexes A-39 through A-41.

6.5 How much is eligible to be placed on LME warrant?

Please see Annex C-1, which shows that approximately 67.6% of total annual refined production for 2011 is linked to an LME registered brand. Additionally, please refer to the response to Questions 5.2 and 5.3.

6.6 How much copper eligible for LME warrant is available for investment purposes?

Please refer to the responses to Questions 1.4, 2.2 and 5.2 and 5.3.

6.7 How much is not eligible to be placed on LME warrant?

In 2011, no more than 32.4% of total global refined production is estimated not to be directly capable of being placed on LME warrant. Metal Bulletin estimates that as of July 31, 2012,

approximately 1.16 million metric tons (approximately $8.8 billion) of the total global refined stocks of 4.1 million metric tons are not LME-brand registered material. Additionally the 1.1 million metric tons of concentrate copper and 2.1 million metric tons of blister copper estimated to be in stock as of July 31, 2012, is not eligible to be placed on LME warrant. The process of making the copper eligible to be placed on LME warrant depends on cost and the time necessary to either (i) in the case of non-LME-brand registered stocks, have the relevant refinery brands registered (ensuring that shape and composition are consistent with the Grade A standard), or (ii) in the case of blister and concentrate stocks, fully refine the material using only LME-registered brand refiners.

Currently, 23 of the 55 brands eligible for the Shanghai Futures Exchange are not registered as LME Brands. As discussed in the response to Question 5.2, this is substantially a result of a lack of necessity due to most of the demand being local to the Chinese market (see Annex C-1).

Question 7: V&F states that Shares will be created by acquiring LME-warranted copper and taking it off warrant to be deposited in the Trust. NYSE Arca represents that it has been informed by the Sponsor that the economics do not support this suggestion, given the large supply of non-warranted physical copper and the cost and time that would be required in order to take LME warranted copper off warrant solely for the purposes of creating Shares. V&F responded, arguing that taking copper off LME warrant would involve little or no cost if LME warrants are purchased for copper that is already stored at the Approved Warehouses. The Commission requests comment on these opposing views. Specifically:

7.1 What costs are involved in taking copper off LME warrant? What costs are involved in putting copper on LME warrant?

7.2 How long does it take to take copper off LME warrant? How long does it take to put copper on LME warrant?

Please read this response in conjunction with the response to Question 6.1.

The cost of placing copper on-warrant is minimal.[59] If the copper to be placed on warrant is already in an LME warehouse, the cost of doing so may, in fact, be zero.

In contrast to placing copper on-warrant, the explicit and implicit transaction costs associated with de-warranting copper can be material. In order to provide consistency and transparency, the LME has established rules and procedures for cancelling a warrant and delivering the underlying copper. In particular, the LME regulates the total weight of metal that an LME warehouse must release each day. Although this threshold may vary depending on the size of the warehouse, it is currently 1,500 metric tons (approximately $11.4 million) per day, across all metals, for warehouses with a capacity of up to 299,999 metric tons (approximately $2.3 billion) of any base metal (excluding minor metals). For practical reasons, if a warehouse-keeper already has a queue of customers awaiting delivery of metal (as a result of previously cancelling LME warrants), the date and time allocated to such party will depend on the number of customers and the amount of LME warrants already cancelled but not yet delivered.

[59] The maximum cost of placing copper on-warrant is limited to the opportunity cost of selling the metal the physical market, which can be represented as the locational premium at the time of warranting the metal.

The length of the queue is important because under the LME requirements applicable to an LME approved warehouse, metal must be physically delivered out of the warehouse before it can be considered de-warranted and removed from the LME Sword system.[60] The Sponsor notes, therefore, that LME warrants cannot simply be cancelled and the underlying copper deposited into the Trust until such copper leaves the original warehouse premises in which it has been stored while on warrant. This means that, although LME warrants are, as the V&F commenters note, "immediately available for sale," the underlying copper associated with those LME warrants is not, generally speaking, "immediately available for use"[61] for the creation of Trust Shares.

It is because of these constraints that an Authorized Participant is (based on current economics) unlikely to de-warrant copper solely for the purpose of using it to create Shares. Doing so would entail the following:

First, the Authorized Participant would need to acquire (and pay for) an LME warrant for copper. Although LME warrants are used to settle trades on the LME, the Authorized Participant probably would not be able to purchase the warrant on the LME, because it would not be assured that the warrant delivered to it at settlement would represent copper located in, or even near, an Approved Warehouse for the Trust.[62] For example, St. Louis has an LME approved warehouse with a large inventory of LME warranted copper (60,650 metric tons as of July 24, 2012) but is not an Approved Warehouse location for the Trust. Therefore, the Authorized Participant would be likely to purchase the warrant in the OTC market, potentially at a premium to the LME price.[63]

Second, the Authorized Participant, as the owner of the LME warrant (and, therefore, the owner of the copper represented by such warrant), would need to instruct the warehouse-keeper (which actually holds the LME warrant in an agency capacity) to cancel the warrant. The Authorized Participant will be allocated a delivery date and time based on the queue of cancelled warrants for all metal not yet delivered out of the warehouse in that location. The Authorized Participant

[60] The standard form of LME Warehouse Agreement states, "Until such time as stocks of metal are reported pursuant to LMEsword alone, metal taken off Warrant, but which is still on the Warehouse's premises, must be combined on the stock return [*i.e.*, the warehouse's reports to the LME] with those stocks actually on Warrant[.]" Rule 8.3.1 of the LME Rulebook, Part 10 (LMEsword Regulations) states, "On the metal represented by a cancelled Warrant being delivered out by a Warehouse, the Warehouse shall notify its London Agent which shall issue a Remove Warrant Instruction in accordance with the LMEsword Operating Procedures." Taken together, these provisions prohibit the removal of copper from the LME system, even if it has been taken off-warrant, until the metal has been delivered out of the applicable warehouse.

[61] The Sponsor notes that the Trust cannot accept any physical copper that is held on warrant by any exchange.

[62] Physical settlement of an LME contract involves the LME randomly assigning each seller (usually a dealer) to a buyer. While the seller is required to deliver a warrant for copper to the buyer, it is the seller's right to determine which warrant to use. Each warrant represents a specific, individually identifiable lot of copper in a specific LME warehouse. If the seller delivered a warrant to the buyer (Authorized Participant) for copper located in a non-approved warehouse, the buyer (Authorized Participant) would need to incur further transaction costs in either transporting the copper to an approved warehouse, or exchanging the warrant in the OTC market for a warrant representing copper in an approved warehouse.

[63] Because it is the seller's right to determine which warrant to deliver in a physically settled LME trade, the seller generally will deliver the cheapest warrant available to it, which may be located in any LME warehouse in the world. Because both buyers and sellers work from this assumption, the LME settlement price generally represents a "floor" transaction price. Purchasing an LME warrant in a particular market that is not the cheapest-to-deliver location for LME warrants may therefore require the buyer to pay a premium over the LME price.

would generally be obliged to pay the warehouse-keeper storage rent at LME-prescribed rates for the period when the copper is warehoused by the warehouse-keeper.

Third, the Authorized Participant would need to arrange for the underlying copper to be physically removed from the warehouse and transported to an Approved Warehouse location for the Trust. Fees and expenses borne by the Authorized Participant would include:

- Free-on-truck charges, which for copper are currently approximately $36 per metric ton; and

- Transportation costs for moving the copper between warehouses. Henry Bath, which serves as the warehouse-keeper for the Trust (given the LME requirements of the warehouse-keeper), would not knowingly permit an Authorized Participant to cancel warrants, load such copper stocks onto a truck and deliver such copper back into the same warehouse to be utilized for the purposes of the Trust. Therefore, an Authorized Participant that wanted to de-warrant copper for purposes of creating Shares would need to either (i) acquire copper from a non-Henry Bath warehouse and bring it to an approved Henry Bath warehouse, in a different city, or (ii) acquire copper from a Henry Bath warehouse in one city and move it to a Henry Bath warehouse in a different city.

Annex C-2 sets forth a number of examples, using different sets of assumptions, to show the cost to an Authorized Participant of de-warranting LME copper in any of the Trust's initial Approved Warehouse locations in the United States (Baltimore, Chicago or New Orleans) for purposes of depositing it in the Trust to create Shares. As shown in Annex C-2, the Sponsor estimates that the cost per lot of de-warranted copper in the United States, assuming that warrant had been purchased at the LME settlement price, would range between $54.48 and $211.82 per metric ton.[64]

By contrast, the cost of using non-LME warranted copper already located in an approved warehouse would be approximately equal to the locational premium in the applicable warehouse location. According to the Valuation Agent for the Trust, non-LME-warranted copper traded in the physical market at a locational premium of $46.67 per metric ton in Singapore, $38.750 per metric ton in South Korea, and $71.25 per metric ton in Shanghai as of July 24, 2012. Based on this information, it is currently less expensive for an Authorized Participant to acquire Creation Units using non-LME-warranted copper warehoused in Singapore, South Korea or Shanghai (if the cost per lot of de-warranted copper is above $71.25 per metric ton), than to take copper off-warrant anywhere in the United States for such purpose.

[64] For each U.S. location in which LME warrants have been registered as held, an estimate is required to be made in respect of the time delay a party might expect to occur if such party were to cancel an LME Warrant in a particular location. This time delay is assumed to be either (i) a queue derived by assuming the current reported "cancelled but not yet delivered" stocks are held evenly in that location by the LME warehouse-keepers continuing operations in such location or (ii) the "cancelled but not yet delivered" stocks are all held by the same warehouse-keeper that is the holder of the metal backed by the LME warrant intended to be cancelled. This derives an upper and lower bound estimate of the cost of rent a party would be required to pay while awaiting delivery. The rent is estimated as the average reported LME Copper rents charged by all LME warehouse-keepers reported to be operating in such location, and the FOT charges are estimated as the average FOT charge reported on the LME website for all LME warehouse-keepers reported to be continuing operations in such location. The destination of transportation is assumed to be the closest geographical location (from the city of delivery) that is a permitted warehouse location of the Trust. The cost of transportation is calculated as the average of all quote estimates received for transportation along such route.

In addition to the fees and expenses described above, an Authorized Participant seeking to de-warrant copper to use for Share creations would also be likely to incur costs and risks. When the Authorized Participant acquires an LME warrant, it holds a long position in copper. If, as can be expected, the Authorized Participant intends to acquire Creation Units in order to fill customer demand for Shares of the Trust, it will likely seek to hedge its exposure between the time it acquires the LME warrant and the time it sells the Shares to its customers. The Sponsor notes that this means that the Authorized Participant must enter into an offsetting short position, most likely by selling a copper contract on the LME or by shorting the Trust's Shares. Either of these options would entail costs to the Authorized Participant that would be in addition to the costs described above. By contrast, non-exchange-registered copper stocks in an Approved Warehouse location can often be purchased and shortly thereafter used to create Shares of the Trust without any of the physical logistics and associated costs described above, thereby reducing the risk and expense to the Authorized Participant of holding (otherwise expensive) stocks of copper. The Sponsor believes that the amount of time required to de-warrant copper, by itself, is reason for which an Authorized Participant would be unlikely to use such copper to create Shares in response to customer demand: the Authorized Participant would be at a competitive disadvantage to any other Authorized Participants that are able to acquire Creation Units quickly and more cheaply using existing non-LME-warranted physical copper stocks, and customers would simply direct their transactions to such other Authorized Participants.[65]

It is commercially rational, therefore, for an Authorized Participant to purchase inventories that involve the least transaction costs and least financing and rental costs and in a location that is considered to have sufficiently high liquidity and availability of stock.

7.3 How does the cost and time required to take copper off warrant compare to the cost and time to ship copper to an Approved Warehouse?

The Sponsor notes that due to the differences in the length of queues at different LME warehouses, the cost and amount of time required to take LME copper off-warrant may vary.

Annex C-2 shows certain assumed scenarios that highlight the potential time and cost of taking copper off warrant for all U.S. LME Warehouse Locations that hold warrants backed by copper as of July 24th, 2012. The conclusion of all scenarios (based on the assumptions made), the Sponsor believes, is that delivery of copper can take from 1 day to 99 days, and cost between approximately $54 per metric ton to approximately $212 per metric ton. Such variables that impact the result include the warehouse location, the amount of warrants (currently of all LME non-ferrous metals except molybdenum and cobalt) previously cancelled but not yet delivered by that specific warehouse, the amount of warrants the specific party intends to cancel, and the location of delivery of such underlying copper from the respective original LME warehouse. Additional inputs that may vary from time to time could include the cost of rent for the period the party waits to receive delivery of the metal and the cost of freight, which would be determined on a case-by-case basis. The amount of time required to transport copper to an Approved Warehouse (the "**destination**") will depend on the original site and form of storage of the copper. This will generally depend on the availability of freight services and the type of transport equipment (truck, rail-car, barge or ship). For example, the average approximate transport time of copper (from warehouse to warehouse, including administrative activities to log and weigh stocks in order to take delivery at the destination by the receiving warehouse) from (i) St. Louis to

[65] In addition, it is the understanding of the Sponsor that the rent charged by warehouse-keepers in non-LME warehouse locations have been historically lower and commercially beneficial to the Authorized Participant.

Chicago is 3 days, (ii) St. Louis to Baltimore is 19 days and (iii) Shanghai or Busan (South Korea) to Baltimore is 42 days.

Question 8: The Commission understands that ETFS Physical Copper securities currently trade on the London Stock Exchange.

8.1 How much copper did ETFS Physical Copper hold following the initial creation?

Following the initial creation of ETFS Copper on December 10, 2010, the market capitalization remained less than $1.6 million for the first 5 days of trading. Cash copper prices at that time imply that ETFS Copper held less than 200 metric tons. The Sponsor also notes that DB Copper, which was launched on July 11, 2011, had a market capitalization of approximately $230 thousand. Cash copper prices as of such time imply that DB Copper held approximately 20 metric tons (please see Annex A-19).

8.2 How much copper does ETFS Physical Copper currently hold?

As of August 1, 2012, ETFS Physical Copper had a market capitalization of approximately $12.9 million. Cash copper prices as of such time imply that ETFS Copper held approximately 1,700 metric tons as of such time. As of August 1, 2012, DB Copper had a market capitalization of approximately $5 million. Cash copper prices as of such time imply that DB Copper held about 660 metric tons (please see Annex A-19).

8.3 What change, if any, was there in the price of copper following creation of ETFS Physical Copper?

Annex A-42 shows the net change in COMEX prompt copper prices and LME cash copper prices over five intervals of time following the start of trading of ETFS Physical Copper on December 10, 2010. Observed price changes demonstrate nothing about causality, if there is any causality, between the introduction of the ETFS product and market prices. A change in these prices is by definition a net change, incorporating all information about the condition of the world at that point in time. Any given factor may increase or decrease price, or have no effect at all, only to be simultaneously offset by other factors. The observed price changes in the table above cannot provide any confirmation as to whether creation of ETFS Physical Copper lowered copper prices, only to be partially or completely offset by a multitude of other economic factors, but it is possible that introduction of the ETFS product helped lower realized prices through reduction of transaction costs.

8.4 Did the creation of ETFS Physical Copper result in an observable impact on the copper market?

The Sponsor is not aware of a causal relationship between creation of this exchange-traded product ("**ETP**") and an observable price impact (upward or downward) in the copper market. The Sponsor does not believe one exists. If one were to exist, the Sponsor would expect the price impact to be downward pressure on the cash copper price due to lower transaction costs and greater flexibility of potential supply sourcing and risk management solutions without having to move inventory. But, given the small size of the ETFS product relative to the size of the physical market, the Sponsor would also expect such a price effect to be very small.

8.5 Has ETFS Physical Copper engaged in the lending of copper?

Because ETFS Copper holds LME warrants, it is subject to the LME's "lending guidance." Lending guidance does not apply to an LME member or client until it holds at least 50% of "WTC positions." WTC positions in a metal are the aggregate of a person's (i) warrant holding (including controlled positions over which the person does not have legal title), (ii) "tom" trading positions (i.e., positions for delivery tomorrow), and cash positions (i.e., positions for delivery in two business days) all in respect of a metal. ETFS Copper has never grown to a size at which it would be required to lend metal.

Question 9: The Commission has previously approved listing on the Exchange under NYSE Arca Equities Rule 8.201 of other issues of CB-ETPs backed by gold, silver, platinum, and palladium (collectively "precious metals"). While these precious metals are often held for investment purposes, the Commission understands they are also used for various industrial purposes. V&F asserts that copper is used exclusively for industrial purposes and is not generally held for investment. The Commission requests information regarding the production and use of precious metals.

9.1 How much gold, silver, platinum, and palladium has been produced in each of the last 10 years?

9.2 How much gold, silver, platinum, and palladium has been used for investment purposes in each of the last 10 years?

9.3 How much gold, silver, platinum, and palladium has been used for industrial purposes in each of the last 10 years?

9.4 Are there any other uses of gold, silver, platinum, and palladium relevant to understanding utilization of these precious metals?

Please refer to Annexes A-43 through A-46. There are several uses of precious metals relevant to understanding utilization and demand. Demand for gold from central banks has been rising. According to GFMS, official sector purchases increased in 2011 by 380 metric tons (approximately $19.7 billion) to 455 metric tons (equivalent to 10% of total gold demand in 2011 and a current market value $23.6 billion). In contrast, between 2000 and 2009, official sector sales accounted for more than 11% of global supply. Jewelry demand (for all precious metals) is a large component of demand; for gold (50%), silver (15%) and platinum (30%), but not yet for palladium (8%). Gold demand for other fabricated products accounts for about 20% of global demand. For silver, industrial applications account for 53% of global demand, silverware accounts for 4%, and coins and medals another 11%. For platinum, industrial applications account for 66% of global demand, primarily from the autocatalyst sector, while, as stated previously, jewelry demand accounts for an additional 30%. For palladium, industrial demand comprises 84% of total demand, also driven by the autocatalyst sector. Medical applications are another use: in palladium, for example, dental applications account for 7% of total demand. For each of these metals, industrial applications and jewelry account for the vast majority of demand, not investment.

The Sponsor notes that the commenters assert that "[l]arge amounts of platinum and palladium are likewise stored worldwide."[66]

[66] See the V&F Letter, at 2.

The Sponsor notes that the commenter's statement immediately follows the assertion that 40% of gold produced each year, and 46% of silver produced each year, is held for investment. The Sponsor believes that the aim of commenter is to imply that the fractions for platinum group metals are similarly large. GFMS data shows that 5% of global platinum produced in 2011 was held for investment. According to GFMS, in 2010 palladium production held for investment was approximately 15% of total production and, in fact, in 2011 there was disinvestment (i.e., additional supply returned to the market).

9.5 What are the current and historic stocks of gold, silver, platinum, and palladium?

Please refer to Annex A-47. GFMS reports that above-ground stocks of gold have grown from 148 thousand metric tons in 2002 to 171.3 thousand metric tons (approximately $8.9 trillion) at year-end 2011. As of year-end 2011, GFMS estimates that of the 171.3 thousand metric tons, 84.3 thousand metric tons (approximately $4.4 trillion) was attributable to jewelry (50%), 29.5 thousand metric tons (approximately $1.5 trillion) to official holdings (17%), 33 thousand metric tons (approximately $1.7 trillion) to private investment (19%), 20.8 thousand metric tons (approximately $1.1 trillion) to other fabricated products (12%), and 3.6 thousand metric tons (approximately $186.8 billion), or approximately 2%, were unaccounted for.

GFMS estimates that identifiable silver bullion stocks (not including private investors' vaults) were 35.9 thousand metric tons (approximately $32 billion) at the end of 2011, slightly less than stocks at year-end 2010 of 36 thousand metric tons (approximately $32 billion). In 2002, GFMS estimates identifiable silver bullion stocks totaled 30.7 thousand metric tons.

At year-end 2011, GFMS estimates above-ground platinum stocks were 4.5 million ounces. At year-end 2002, GFMS estimates that above-ground platinum stocks totaled 1.5 million ounces. GFMS reported that 2011 year-end palladium stocks totaled 11.2 million ounces and 13.2 million ounces at year-end 2002.

9.6 Is there any empirical evidence that the listing of CB-ETPs backed by gold, silver, platinum, or palladium impacted prices in these markets?

The Sponsor is unaware of any empirical evidence that the listing of these ETPs impacted prices, either up or down, in these markets. The Sponsor notes that the commenters assume that if there were to be an impact on price, it must be upward. The Sponsor believes that the inaccuracy of this one-way assumption is proven by the empirical evidence presented on dispersion in historical inventory-to-price relationships, as well as the economics of lower transaction costs.

Physical metal ETPs (including those backed by gold, silver, platinum and palladium) are designed to track the price movements of the underlying metal. Prices are affected by a number of factors, including cost of production. GFMS reports that in 2011, the world average production cost for gold (including cash and non-cash costs, sustaining capital expenditure, indirect costs and overheads) increased by 22% to $1,044 per ounce. More recent evidence in the financial filings from major producers show substantial cost inflation has persisted into 2012. In July 2012, Barrick Gold Corporation ("**Barrick Gold**"), the world's largest gold producer, announced that second quarter average total cash costs increased by 38% from last year to $613 per ounce. Goldcorp Inc. reported second quarter average cash costs (including by-product credits) of $370 per ounce, significantly higher than last year's cost of $185 per ounce. Production costs at major producers' marginal mines are even more dramatic (remember it is marginal production costs

that are most critical for setting commodity prices). Production costs at Barrick Gold's mines in Tanzania have increased by 30% or more over the past year, reaching $1,435 per ounce. Please see Annex A-48. Production costs at Newmont Mining's Waihi mine in New Zealand have surged to $2,055 per ounce in the first quarter of 2012 from $775 per ounce in 2011. Please see Annex A-49. Shortages in the skilled labor market, rising fuel costs, and higher prices for mining equipment have contributed to rising production costs. Please see Annex A-50.

Question 10: V&F estimates that creation of the Trust could result in the immediate removal of up to 61,800 metric tons of copper from LME warehouses. NYSE Arca states its understanding that the Sponsor currently expects that the value of the initial creation units to be issued by the Trust would not exceed 10,185 metric tons. Further, while the Trust is seeking to register 6,180,000 Shares, the Exchange states that like the other CB-ETPs, the Trust is seeking to register significantly more Shares than it intends to sell initially.

10.1 What is the likelihood that the Trust will sell all registered Shares in the three months after the registration goes effective?

The Sponsor does not believe that the Trust will sell all registered Shares in the three months after the Registration Statement goes effective given the Sponsor's current marketing expectations.

10.2 What is the likelihood that the Trust will sell all registered Shares initially?

The Registration Statement indicates that the Trust initially seeks to register 6,180,000 Shares. However, the Trust will not immediately issue that number of Shares, as would be the case in a traditional IPO. Instead, Shares will be issued only to the extent that there is investor demand for Shares and Authorized Participants seek to fulfill such demand by ordering additional Shares from the Trust. The Trust will also redeem Shares that are submitted by Authorized Participants for redemption. This activity is identical to that of existing physical metal ETVs, which continuously create and redeem shares in response to Authorized Participant demand. Like all other physical metal ETVs, the Trust will register significantly more Shares than it initially intends to sell so that it is able to meet any such demand. The Sponsor believes that the issuance of new Shares to Authorized Participants will not necessarily cause the Trust to increase in size, to the extent that such issuances are offset by redemptions of Shares by Authorized Participants.

An affiliate of the Sponsor intends to serve as the Authorized Participant that will acquire the initial Shares issued by the Trust. The size of the initial order will primarily be a function of demand for Shares at that time, and has not yet been finally determined. However, the Sponsor currently expects that the value of the initial Shares issued by the Trust will not exceed $75 million, which corresponds to approximately 9,893 metric tons, or approximately 396 lots of copper in the current cheapest-to-deliver location for the Trust as of July 31, 2012, and it is unlikely (given equivalent developments in the launch of the platinum and palladium ETVs) that the Trust will sell all registered shares in the three months following the registration goes effective.

As discussed in the response to Question 2.2 above, the initial creation order will not use copper that has been taken off-warrant for such purpose and is contractually possible to be redeemed in exchange for the underlying copper as discussed in the introduction to Part II. Thus, the commenters' claim that the Trust will result in the "immediate removal from the market of as much as 61,800 metric tons (approximately $468.5 million) of such copper" is incorrect.

As discussed in the response to Question 3.1, it is possible that over time the Trust will grow significantly, if investor demand leads Authorized Participants to submit more creation orders than redemption orders to the Trust. However, the Sponsor expects that this process will occur gradually. The Sponsor does not expect the size of the Trust to exceed $75 million, or the equivalent of 9,893 metric tons of copper at the cheapest-to-deliver location for the Trust as of July 31, 2012, in the first three months following launch.

10.3 How quickly did the CB-ETPs backed by gold, silver, platinum, and palladium sell the shares registered in the first registration statement?

Please refer to Annexes A-51 through A-54.

Question 11: V&F argues that, by decreasing the amount of copper available for immediate delivery, the Trust will make the copper market more susceptible to manipulation. Specifically, V&F states that "the drawing down of stocks in LME and COMEX warehouses" resulting from the listing and trading of the Shares "will make it much easier and cheaper for [copper market] speculators to engage in temporary market squeezes and corners." Senator Levin also argues that approval of the proposed rule change would make the copper market more susceptible to squeezes and corners by speculators. The Commission requests comment on these concerns, as well as whether commenters agree or disagree with the comments and why or why not. For example:

11.1 Will creation of the Trust impact the ability to manipulate the physical copper or copper derivatives markets? If so, how? If not, why not?

For the reasons discussed below, the Sponsor disagrees with the claim that the Trust would facilitate manipulation and believes that, by enhancing transparency, the Trust would potentially reduce the ability to manipulate the copper market and increase the ability of regulators to detect and act on attempted manipulation.

The Trust will not facilitate manipulation by reducing available supply, because the Trust will not reduce available supply.

The commenters assert that the Trust will "draw down" warehouse stocks, shrink available supply, and thereby make it easier for a would-be manipulator to acquire a large enough share of remaining supply to effect a corner or squeeze. The Sponsor believes that this claim, like virtually all of the commenters' allegations, proceeds from the faulty premise that the Trusts' copper inventories will be inaccessible to the market and, therefore, be removed from available supply. As discussed above in Section II.A.1., the Sponsor believes that this assertion is incorrect. Trust inventories will be readily obtainable by market participants through the redemption mechanism. The aforementioned notwithstanding, the Sponsor would not expect available supply to be appreciably affected because the percentage of available supply held in the Trust will be relatively small, as discussed in the response to Question 3.1 and 4.1 above.

The underlying market is subject to extensive and explicit regulatory authority.

In response to the commenter's suggestion that the manipulation that would allegedly result from the rule change "would go undetected" because "ETFs are not currently subject to any form of commodity regulations,"[67] the Sponsor notes that all participants in the physical copper market

[67] Levin Letter, at 7.

are subject to explicit, and recently enhanced, regulation that specifically addresses the types of practices that the commenters allege would be likely to result from listing of the Trust. Under Section 9(a)(2)[68] of the Commodity Exchange Act (**"CEA"**), it is a felony punishable by up to ten years' imprisonment for "[a]ny person to manipulate or attempt to manipulate the price of any commodity in interstate commerce, . . . or to corner or attempt to corner any such commodity." Section 753 of the Dodd-Frank Wall Street Reform and Consumer Protection Act (the **"Dodd-Frank Act"**) broadened the CEA's prohibitions of and increased penalties for manipulation, in both contract and underlying physical commodity markets, and gave the CFTC expanded authority to enforce them. As amended by Section 753 of the Dodd-Frank Act, CEA Section 6(c)[69] authorizes the CFTC to assess treble damage penalties for manipulation or attempted manipulation of the price of any commodity in interstate commerce and to adopt rules to prevent manipulative practices. On July 14, 2011 the CFTC adopted Rules 180.1 and 180.2 pursuant to amended CEA Section 6(c).[70] Rule 180.1, modeled after Section 10(b) of and Rule 10b-5 under the Exchange Act, broadly prohibits fraud and fraud-based manipulations, including any such attempts. Rule 180.2 addresses the elements of price-based manipulation and attempted manipulation. The CFTC stated in its adopting release that it intended to give both rules a broad, remedial reading and in particular to interpret Rule 180.2 "to encompass every effort to improperly influence the price of a swap, commodity, or futures contract."[71]

The Sponsor notes that as a result of well-publicized historic examples of commodities manipulation, various measures were implemented by exchanges and regulators to counter participants' ability to engage in manipulation. These generally help protect the market and its participants (with the Trust being one such participant). For example, following the Sumitomo affair[72], the LME introduced broad powers whereby it could obtain information, including "information relating to the over-the-counter business of a member or any of its affiliates in metals" that are traded on the LME, if it has "cause to suspect the existence or to anticipate the development of likely development of an undesirable situation or undesirable or improper trading practice". In addition, the LME rules impose stringent requirements on LME members to ensure that they neither manipulate the market nor create or attempt to create a disorderly market nor assist any other person to do so. In the context of the Trust, there will be a number of LME members or affiliates of LME members involved in the operations of the Trust (for example, as Authorized Participants). The activities and conduct of such members or affiliates of LME members will be subject to the LME rules and obligations thereunder. Moreover, as indicated in the Notice, the LME and the Exchange have entered into a comprehensive surveillance sharing agreement that applies to trading in copper.

The increased transparency furnished by the Trust will enhance regulators' ability to oversee the copper market and enforce the above provisions.

The Trust will enhance visibility into the global copper market in important respects:

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[68] 7 U.S.C. § 13(a)(2).

[69] 7 U.S.C. § 9, 15.

[70] Prohibition on the Employment, or Attempted Employment, of Manipulative and Deceptive Devices and Prohibition on Price Manipulation, 76 Fed. Reg. 41,398 (July 14, 2011).

[71] *CFTC Rules,* 76 Fed. Reg. at 41,401.

[72] In the Matter of Sumitomo Corp., CFTC Docket No. 98-14 [1996-1998 Transfer Binder] Comm. Fut. L. Rep. (CCH) ¶ 37,327 (Cmm'n May 11, 1998) (order).

Global locational prices and premia. As noted in Section I.B. above, prior to July 16, 2011, locational premia for physical copper were publicly reported on an infrequent basis, and only for certain broad regions (e.g., Western Europe). Since July 16, 2011, however, in anticipation of the Trust's potential launch, the Trust's valuation agent has determined the locational premium for physical copper in each of the Trust's Approved Warehouse locations on a daily basis, and published it on a weekly basis. The Sponsor believes that if the proposed rule change is approved, visibility into worldwide pricing will be further enhanced by daily update and publication of the following information on the Trust's website (among other information):

- The locational premium for each warehouse location where the Trust is permitted to hold copper, as calculated by the Valuation Agent at 5:00 p.m. London time, quoted both in U.S. dollars and as a percentage premium relative to the LME settlement price; and

- The price per metric ton of copper in each warehouse location where the Trust is permitted to hold copper.

Previously unreported supply information. As discussed in the Registration Statement, and also noted by V&F in its filing dated July 13, 2012, a large proportion of current global copper inventories are held as inventories that are not registered on exchanges, as discussed on page 20 of the Registration Statement. These markets currently are irregularly reported on and not generally considered, on a relative basis, a transparent market. Because the Trust has been specifically structured to hold inventories of physical copper that is non-exchange-registered, the Trust will, if listing is approved, report holdings on a daily basis that otherwise would not be public and transparent. Additionally, as discussed on page 64 of the Registration Statement, the Trust will accept copper at permitted warehouse locations situated throughout the world, including at locations that are not LME warehouse locations (for example, the LME currently does not have warehouse locations in China, which is one of the most liquid locations for copper, whereas the Trust will have a Shanghai, China copper location). As discussed on page 57 of the Registration Statement, information regarding the warehouse location for every lot of copper held by the Trust will be published on the Trust's website. As discussed on page 8 of the Registration Statement, if the proposed rule change is approved, the following information, among other things, detailing the Trust's global inventories will be published and updated on its website daily:

- The aggregate weight in metric tons of all copper owned by the Trust;

- The aggregate weight in metric tons of the copper owned by the Trust in each warehouse location; and

- The gross value in U.S. dollars of the copper owned by the Trust in each warehouse location.

In addition, the Trust's Share creation and redemption activity, including the locations of creations and redemptions pursuant to the Trust's fully disclosed "selection protocol" for determining the lots of copper that would be delivered out of the Trust upon a redemption, will be completely transparent, disclosed on the website and updated daily.

The Sponsor believes that the enhanced transparency furnished by the Trust will: (a) reduce susceptibility to corners and squeezes by giving market participants visibility into copper prices and availability worldwide; and (b) increase regulators' ability to detect and take action in the event of irregular trading, by giving them visibility into daily locational price movements. One of

the indications of an incipient corner might be a significant increase in price at a particular location relative to the price of the same or similar products at different locations.[73] The Sumitomo copper manipulation alleged by the CFTC in the 1990s, for example, involved holding dominant positions in certain locations.[74] The Sponsor believes that activity of this type may have been observed earlier had pricing information specific to the respective locations been more publicly available.

11.2 Has there been any increased manipulative behavior due to the reduction of copper available for immediate delivery that resulted from the prior years' deficits in copper production versus copper consumption?

It is the understanding of the Sponsor that there has been no such increased manipulative behavior.

11.3 Are there any structural aspects of the copper market that render it more or less susceptible to manipulation?

As discussed previously, the price of copper is predominantly driven by the market's expectation of the marginal cost of production as a result of future production and demand over the medium to long-term. Material and unexpected use of inventories has the potential to increase uncertainty in the market over the short-term. Given the recent increase in trading activity on different regional exchanges and the increased understanding the market has in respect of non-exchange-registered inventory levels, there is much less uncertainty. Any action that will further improve transparency of information regarding available inventories should be a positive development for the market.

The Sponsor notes that following the Sumitomo copper manipulation alleged by the CFTC in the 1990s, the LME implemented new reporting standards applicable to its members in addition to implementing a new mechanism of "lending guidance," with the objective of reducing the potential for parties to act in concert to hold unreported dominant positions in the market, and seek to profit by lending or rolling such positions at artificially high prices. These lending guidance measures have been supplemented over time and considered particularly effective as limits are established as a percentage of the market as a whole. The lending guidance requires holders of dominant positions to lend such positions at incrementally less expensive rates (depending on the percentage holding of aggregate positions). The Sponsor believes that, together with other regulations as discussed in the response to Question 11.1, this reduces the profit incentive of any dominant position in addition to increasing the reporting requirements of LME members.

The Sponsor believes that increased market transparency as it relates to the total refined copper stocks and changes in locational premia, both of which result from the registration of the Trust, improve the information of the market in identifying disruptions.

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[73] Testimony of Craig Pirrong, Professor of Finance and Energy Markets Director of the Global Energy Management Institute at the Bauer College of Business at the University of Houston before the House Committee on Agriculture at 3, (Nov. 6, 2008), *available at:* http://ftc.gov/os/comments/marketmanipulation2/538416-00018.pdf.

[74] In the Matter of Sumitomo Corp., *available at:* http://www.cftc.gov/ogc/oporders98/ogcfsumitomo.htm.

11.4 Is there empirical evidence that the creation of CB-ETPs backed by gold, silver, platinum, and palladium has led to manipulation of the physical markets for those precious metals? If so, please describe.

The Sponsor does not believe that creation of these ETPs has led to manipulation of the physical markets for those precious metals. The Sponsor is not aware of any empirical evidence that would substantiate such a claim. The Sponsor would also note that the commenters also have not offered any such evidence.

Question 12: Both Commenters discuss concerns about the potential impact of the Trust on the copper market, and how that potential impact could, in turn, affect the Shares. V&F states that, with the risk of an ETF removing indefinitely all or substantially all of the copper available for immediate delivery, the risk of price volatility becomes enormous. This is because the greater amount of copper artificially kept off-the-market, the greater the chance that investors will eventually no longer keep propping up the price with further purchases, and the greater the likelihood that the bubble will burst, thus flooding the market with surplus copper, and severely depressing the price.

V&F further states that investors in a copper CB-ETP would benefit immediately from any increase in the price of copper because the more copper removed from the market to satisfy the demand for the copper CB-ETP, the higher the price not only of copper, but of the copper CB-ETP itself. V&F notes that, like all bubbles, as investor demand for this product wanes, the bubble will burst, leaving in its wake a glut of physical copper that the Trust will be forced to dump on the market, causing prices to plummet, and leaving in its wake unsuspecting investors who will have lost the value of their investment. Senator Levin also makes statements about the potential effect on the Shares, stating that the "supply disruption is likely to affect the cash and futures market for copper, increasing volatility and driving up…[the Share] price to create a bubble and burst cycle."

12.1 Do commentators agree or disagree with these comments? If so, why or why not?

Please see the response to Questions 7.1 and 7.2 above regarding whether the Trust will affect the supply of copper available for immediate sale versus immediate delivery.

The Sponsor believes that the commenters' statements regarding the potential for price bubbles reflect a misunderstanding of the nature of physical metal ETVs and, indeed, all other types of ETPs that track a particular index or asset. Physical metal ETVs, like traditional ETFs and other index- or asset-based ETPs, tend to increase in size when investors anticipate that the underlying assets will appreciate and decrease in size when investors anticipate that the underlying assets will depreciate. The Sponsor believes that the Trust is no different from such other vehicles in this regard, and to evaluate it on the basis that Shares might in the future increase and then decrease in value would make no more sense than barring investors from investing in an S&P 500 ETF because the S&P 500 could increase and then decrease in value.

Moreover, because of the arbitrage mechanism that is common to all types of ETPs, the prices of such vehicles generally follow rather than drive the price of the underlying asset.[75] In theory, if extremely high investor demand for shares of an ETP caused it to grow very rapidly relative to the size of the market for the underlying asset, such demand could place upward pressure on

[75] The arbitrage mechanism of the Trust is discussed extensively in the Notice and in the Registration Statement. See Notice, at 30-31 and 49-51; Registration Statement, at 60-61.

prices of the underlying assets. However, given the anticipated initial size of the Trust and the size and depth of the physical copper markets, as discussed above, the Sponsor does not expect the Trust to cause a spike in copper prices. Conversely, redemptions of Shares would only be able to drive down the price of copper if the Trust were extremely large relative to the size of the physical copper markets and experienced massive redemptions over a very short period of time. While this is a theoretical possibility, the Sponsor does not expect that the Trust would become large enough for this effect to materialize. Even if the Trust was to grow to $500 million in assets – or approximately 67.9 thousand metric tons of copper at current LME prices – it would still represent less than 1.6% of current estimated global physical copper stocks (4.1 million metric tons (approximately $31.1 billion)) and 0.33% of 2012 estimated total annual consumption (20.4 million metric tons (approximately $154.7 billion)), which is less than an amount that would reasonably be expected to significantly impact the global copper market under any likely redemption scenario.

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The Sponsor appreciates the opportunity to respond to the Commission's request for comments. Should you have any questions please do not hesitate to contact us.

Very truly yours,

/s/ John G. Crowley

John G. Crowley

ANNEX A

A-1: In real price terms, the 2011 average cash price of copper was about 20% below the record high set a century ago.

Nominal and real copper prices (deflated by US CPI)

US$ per metric tonne

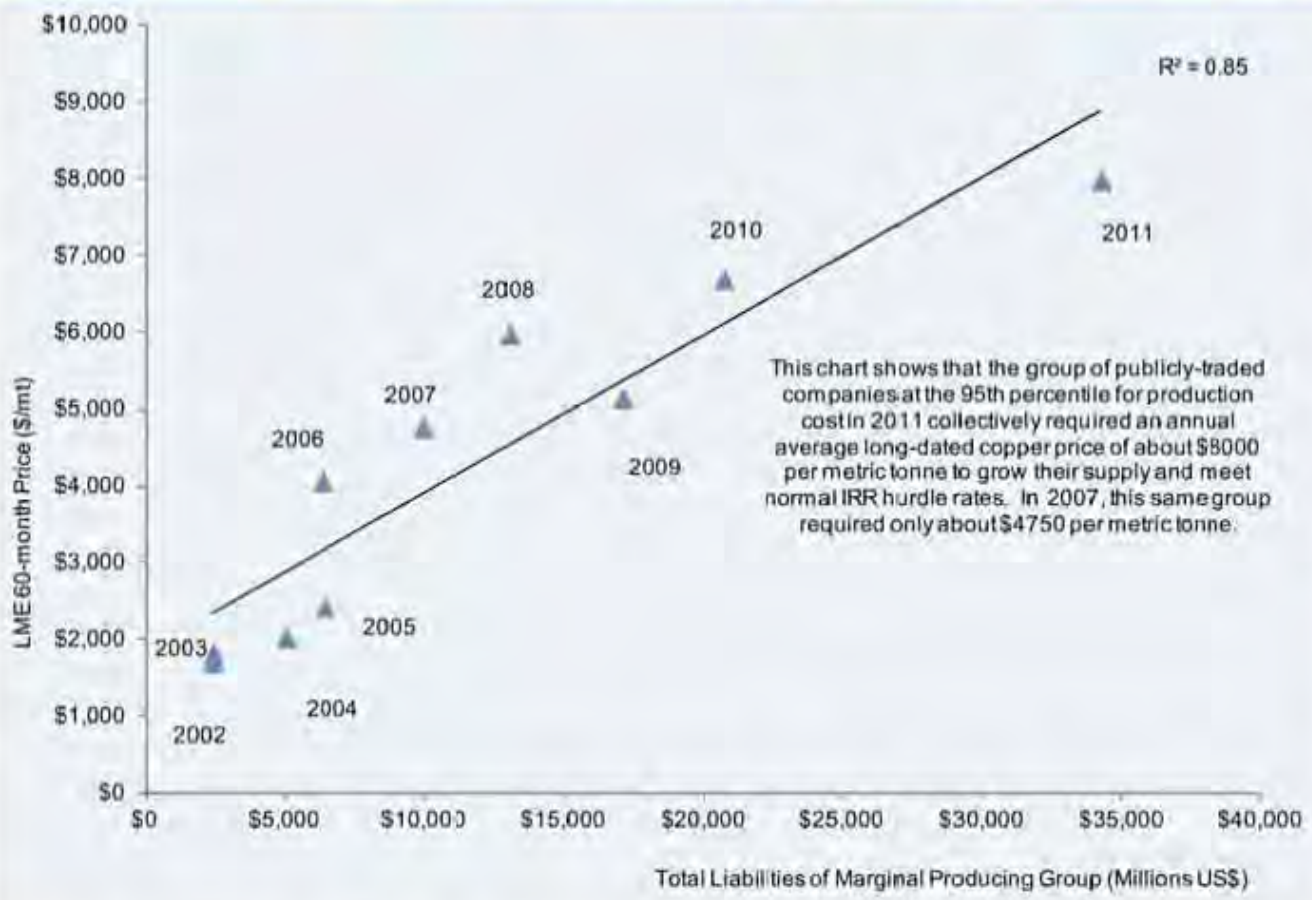
Source: USGS, BLS, J.P. Morgan

The data for this chart can be found in Annex B-40

ANNEX A

A-2: Long-dated LME copper prices have been orderly in discounting capex hurdle rates. This is evidence of fundamental and fair price discovery.

LME 60-month copper price (US$/mt, y-axis) plotted against total liabilities of the publicly-traded companies at the 95th percentile for production cost as of 2011 (US$Mn, x-axis).



Producers at 95% (2011) (0.369 mmt, 2011 output)

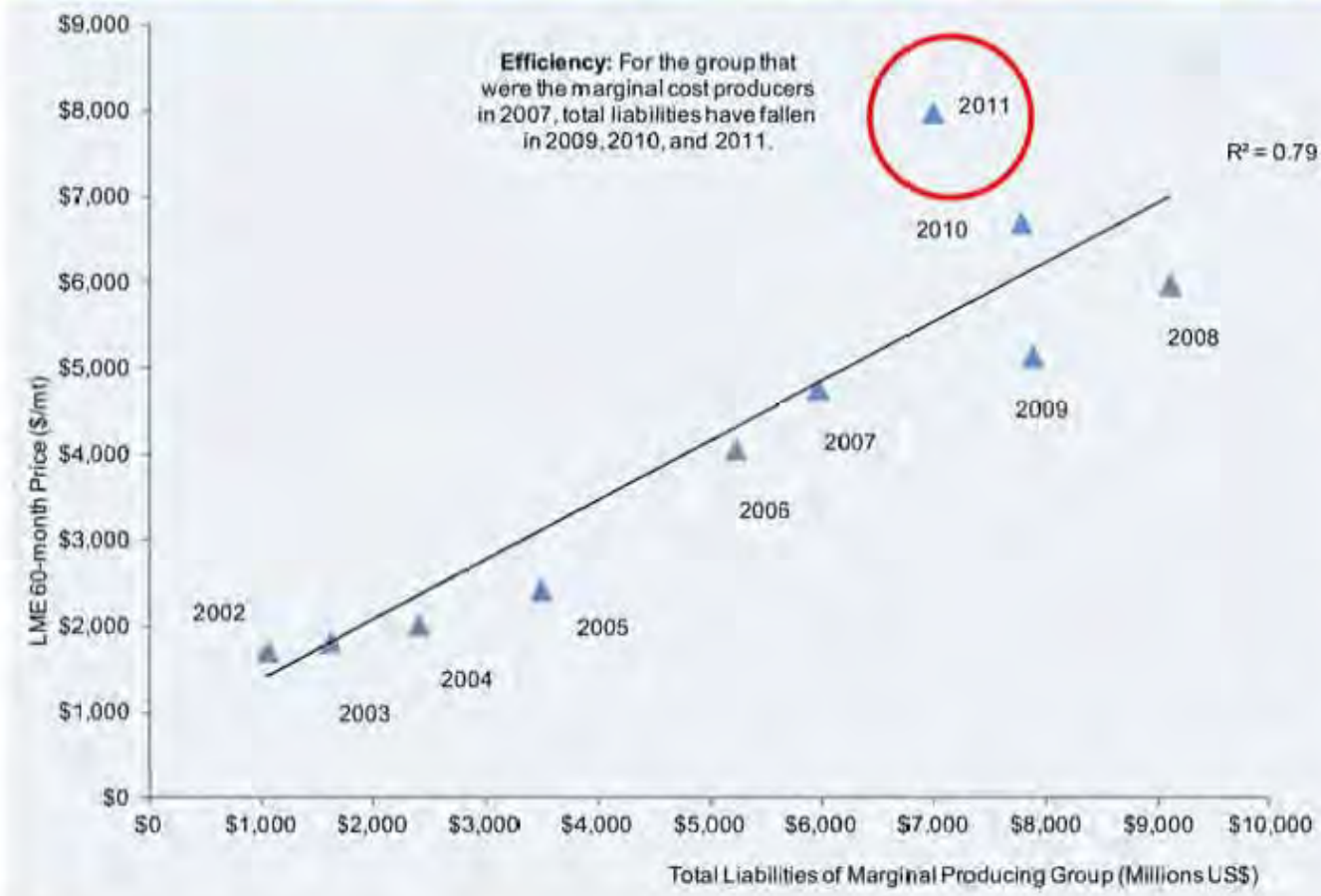
- Atlas Consolidated Mining
- Bass Metals
- Birla Copper
- Caraiba Metais
- Exxaro Resources
- Imperial Metals
- Independence Group
- Katanga Mining
- Managem
- Nyrstar
- Pan American Silver Corp
- Raura
- Trevali Mining
- TVI Pacific
- Vendanta Resources

Source: Company reports, LME, J.P. Morgan

The data for this chart can be found in Annex B-2

A-3: The fall in total liabilities in the 2007 vintage of marginal cost producers is evidence of market efficiency achieved through investor-financed producer hedging.

LME 60-month copper price (US$/mt, y-axis) plotted against total liabilities of the publicly-traded companies at the 95th percentile for production cost as of 2007 (US$Mn, x-axis).



Producers at 95% (2007) (0.936 mmt, 2011 output)

- African Copper
- Anvil Mining
- Birla Copper
- Capstone Mining
- Constellation Copper
- Orsu Metals
- First Quantum
- Frontera Copper
- Kazakhmys
- OZ Minerals
- PanAust Ltd
- Penoles
- Polymet Mining
- Straits Resources

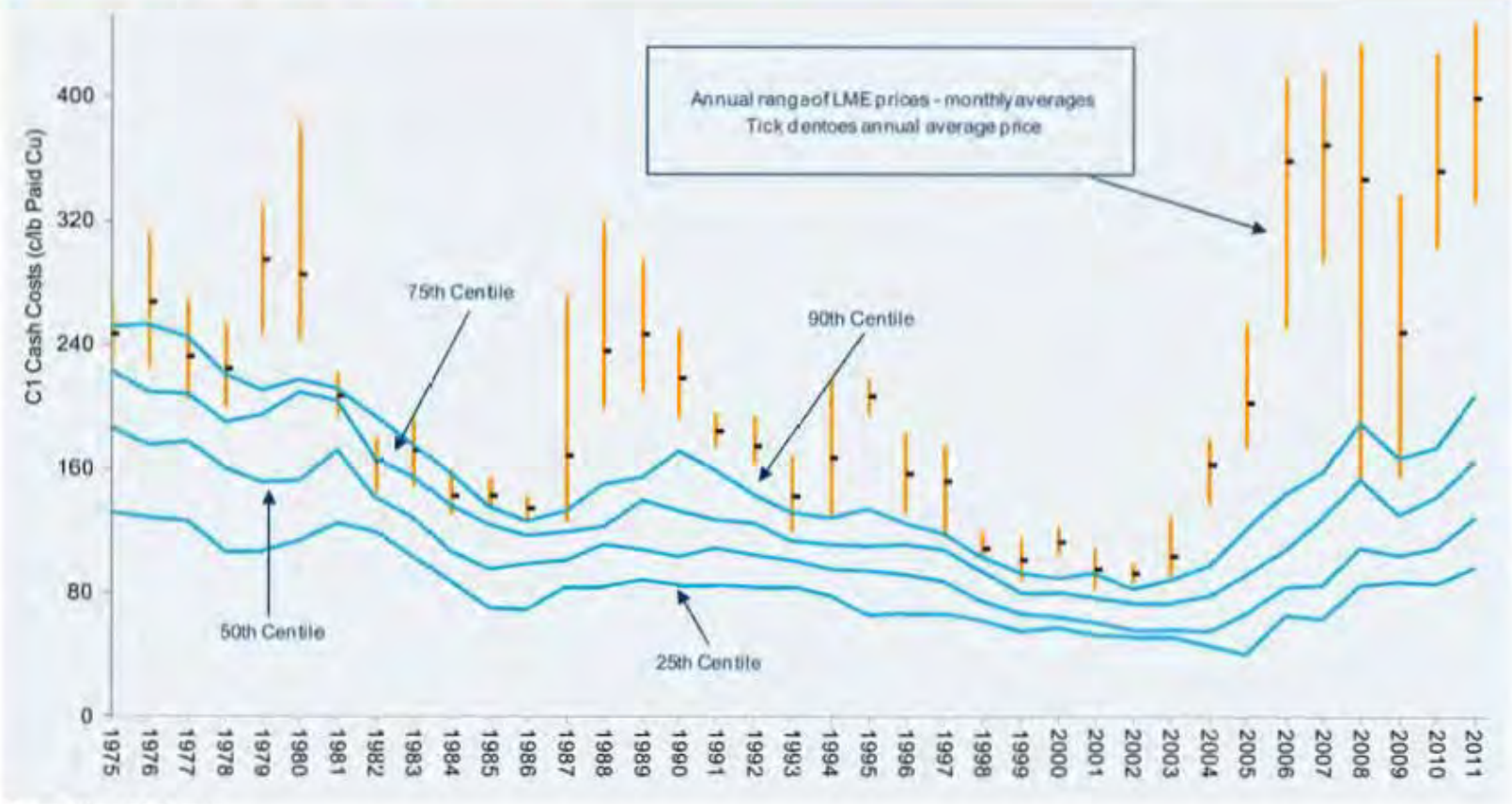
Source: Company reports, LME, J.P. Morgan

The data for this chart can be found in Annex B-2

A-4: During cyclical lows for demand, copper prices have historically found support at the 90th percentile of the global production cash cost curve.

Monthly average LME cash copper prices plotted against the distribution of global production cash cost (C1)

Copper prices in real terms (US$2011)



Source: Wood Mackenzie

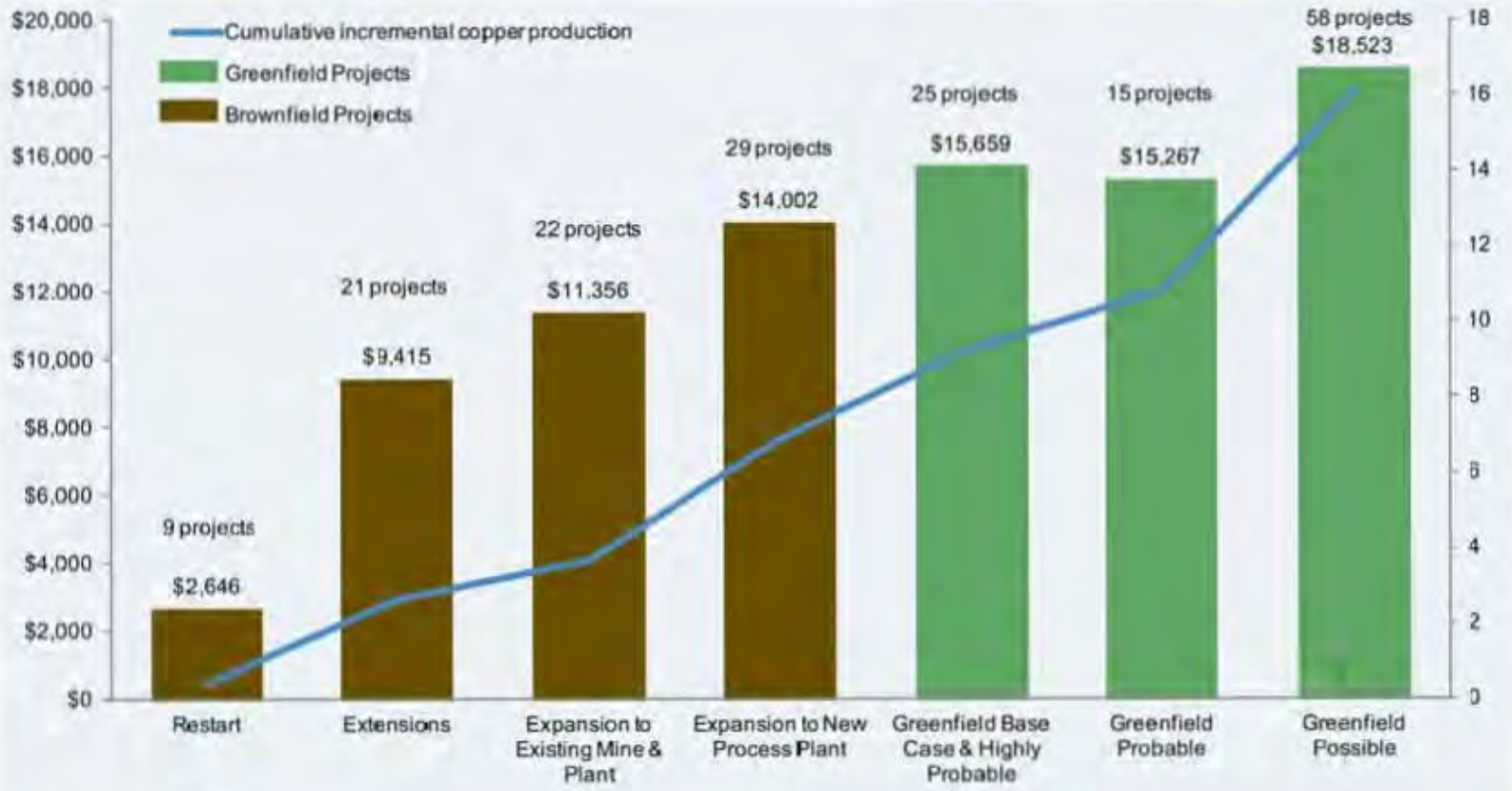
The data for this chart can be found in Annex B-3

ANNEX A

A-5: Greenfield projects generally have a higher capital intensity than Brownfield projects.

Capital intensity of 179 projects either in construction, likely to be developed, or possible Greenfield projects that could be developed over the next 10 years

Capital intensity (US$ per metric tonne of copper equivalent production per year) LHS. Cumulative projected copper production growth (million metric tonnes) RHS



Source: Wood Mackenzie

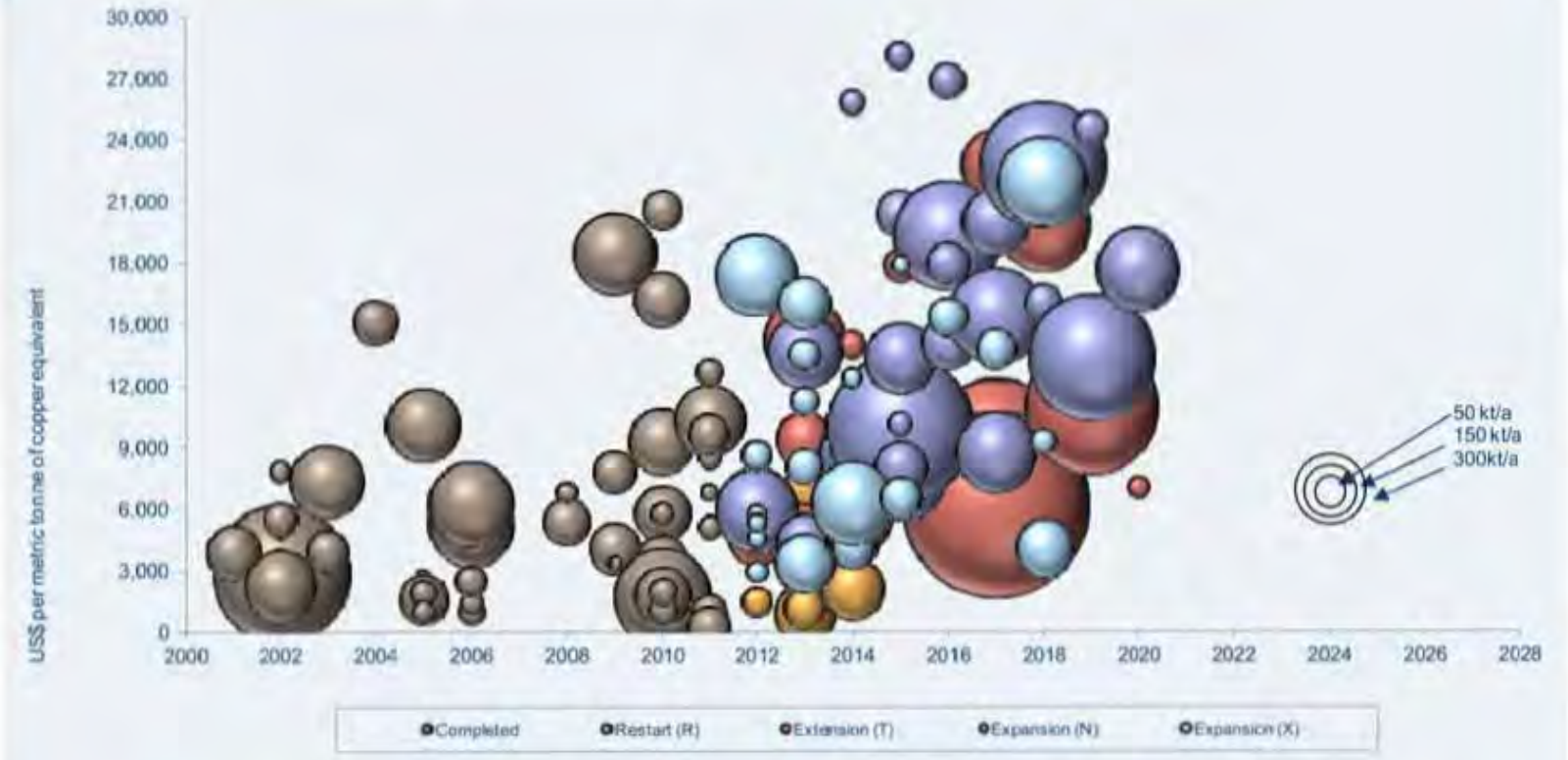
The data for this chart can be found in Annex B-4

ANNEX A

A-6: Although Brownfield projects typically have lower capital intensities than Greenfield projects, some Brownfield projects have similar or higher capital intensities.

Capital intensity of historical and current Brownfield developments

Capital intensity in real terms (US$2011)



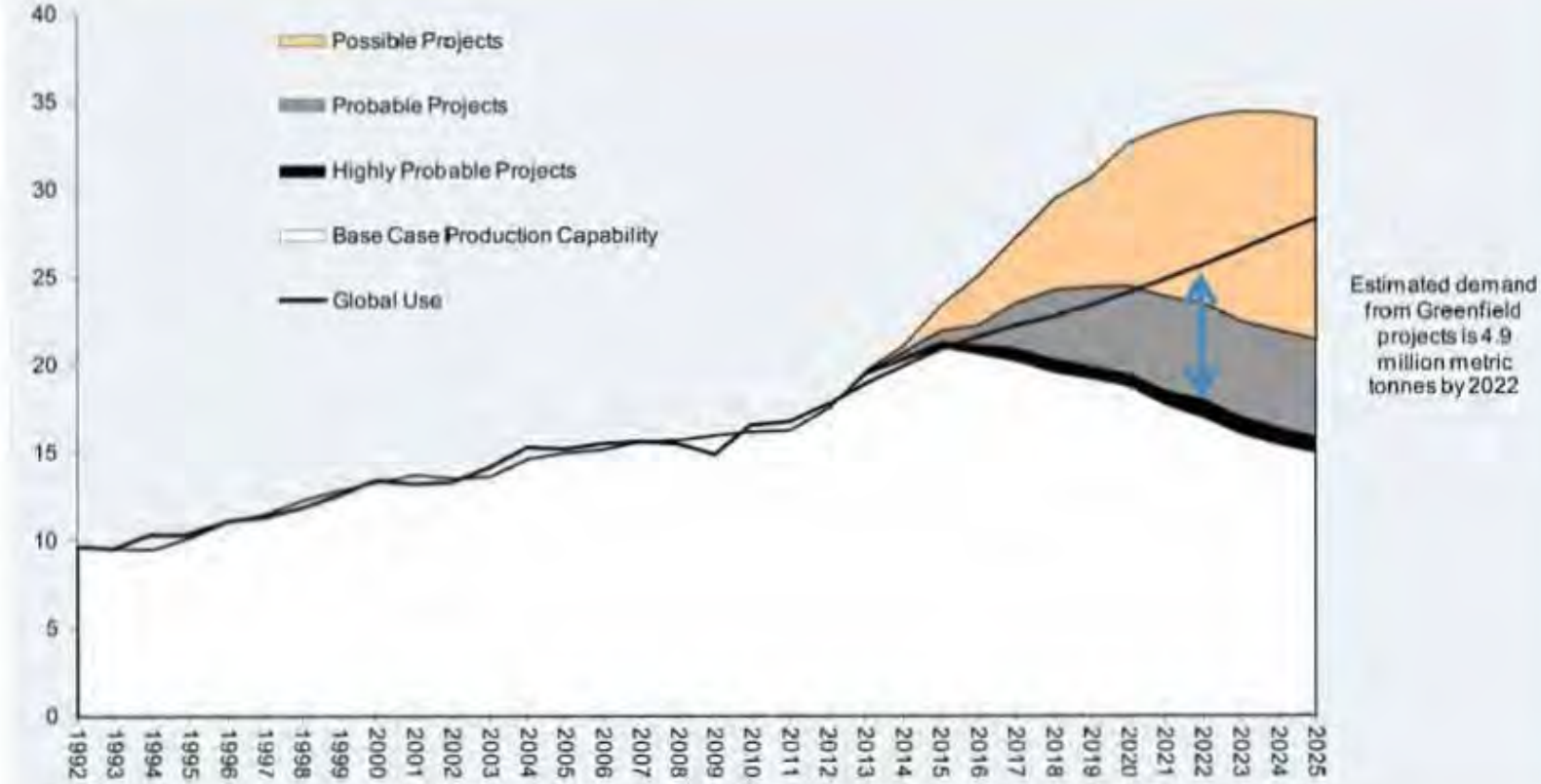
Source: Wood Mackenzie

The data for this chart can be 'ound in Annex B-5

A-7: It is impossible to perfectly align investment and consumption cycles due to uncertainty of demand, technological change, and substitution effects. This fact creates unavoidable risk.

Global copper refined production and use with projections through 2025

Million metric tonnes



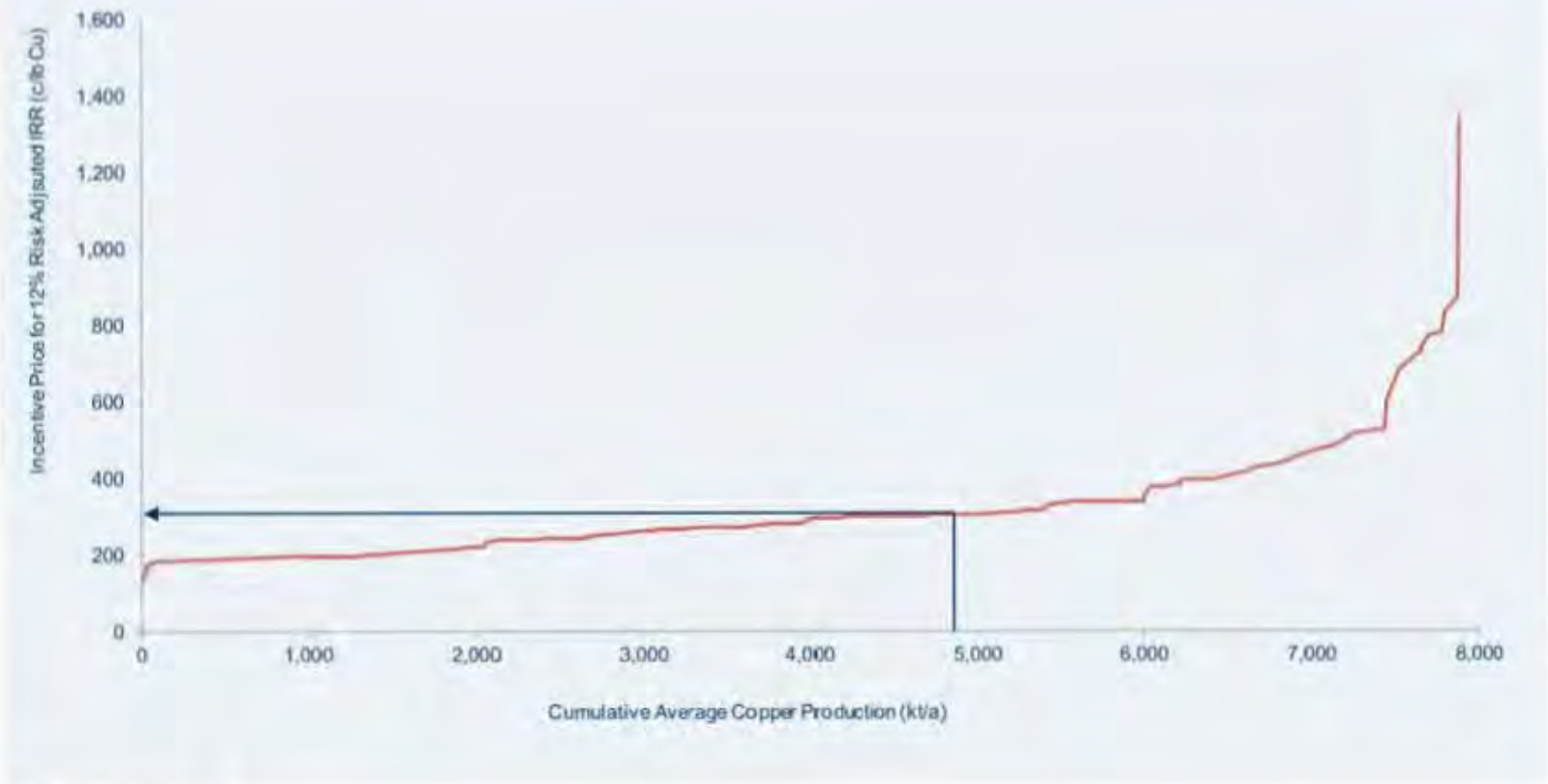
Source: Wood Mackenzie

The data for this chart can be found in Annex B-6

A-8: Wood Mackenzie estimates that a long term copper price of about $6600 per metric tonne (in real $2011) is necessary to incentivize new Greenfield mine production to keep the global market in balance over the next decade.

Estimated price required for supply growth

Estimated market price required to achieve a 12% risk adjusted IRR in cents/lb (y-axis), cumulative average copper production growth in thousand metric tonnes per year (x-axis)



Source: Wood Mackenzie

The data for this chart can be 'ound in Annex B-7

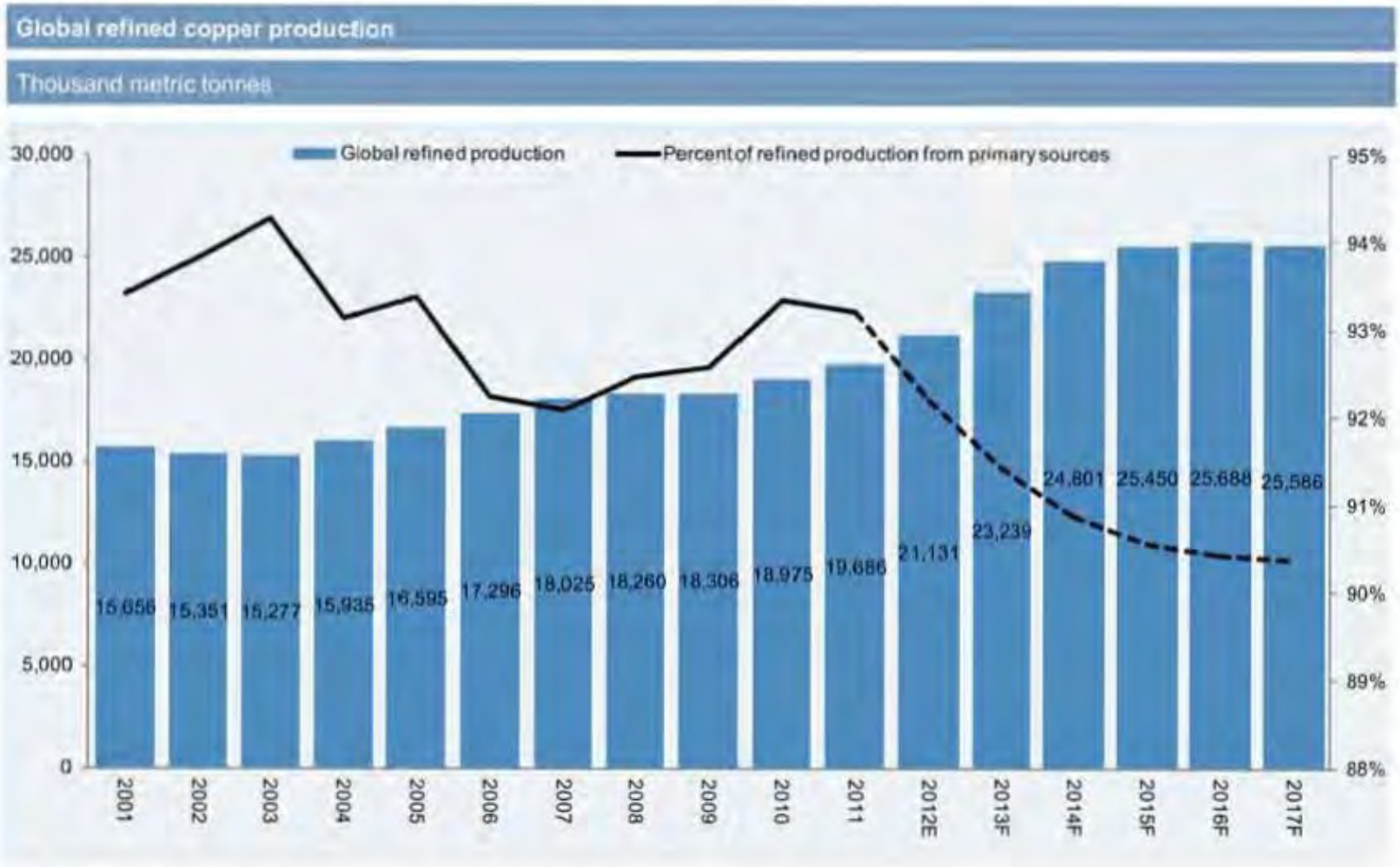
ANNEX A

A-9: Global copper mine production.

Source: Wood Mackenzie

The data for this chart can be found in Annex B-1

A-10: Global refined copper production has grown from 15.7 million metric tonnes in 2001 to 19.7 million metric tonnes in 2011. Refined production from primary sources has ranged between 91% and 94%.



Source: Wood Mackenzie

The data for this chart can be found in Annex B-1

A-11: Global refined copper production capacity grew from 18.0 million metric tonnes in 2001 to 25.0 million metric tonnes in 2011.

Source: Wood Mackenzie

The data for this chart can be found in Annex B-1

A-12: Global refined copper use has grown from 14.7 million metric tonnes in 2001 to 19.8 million metric tonnes in 2011.

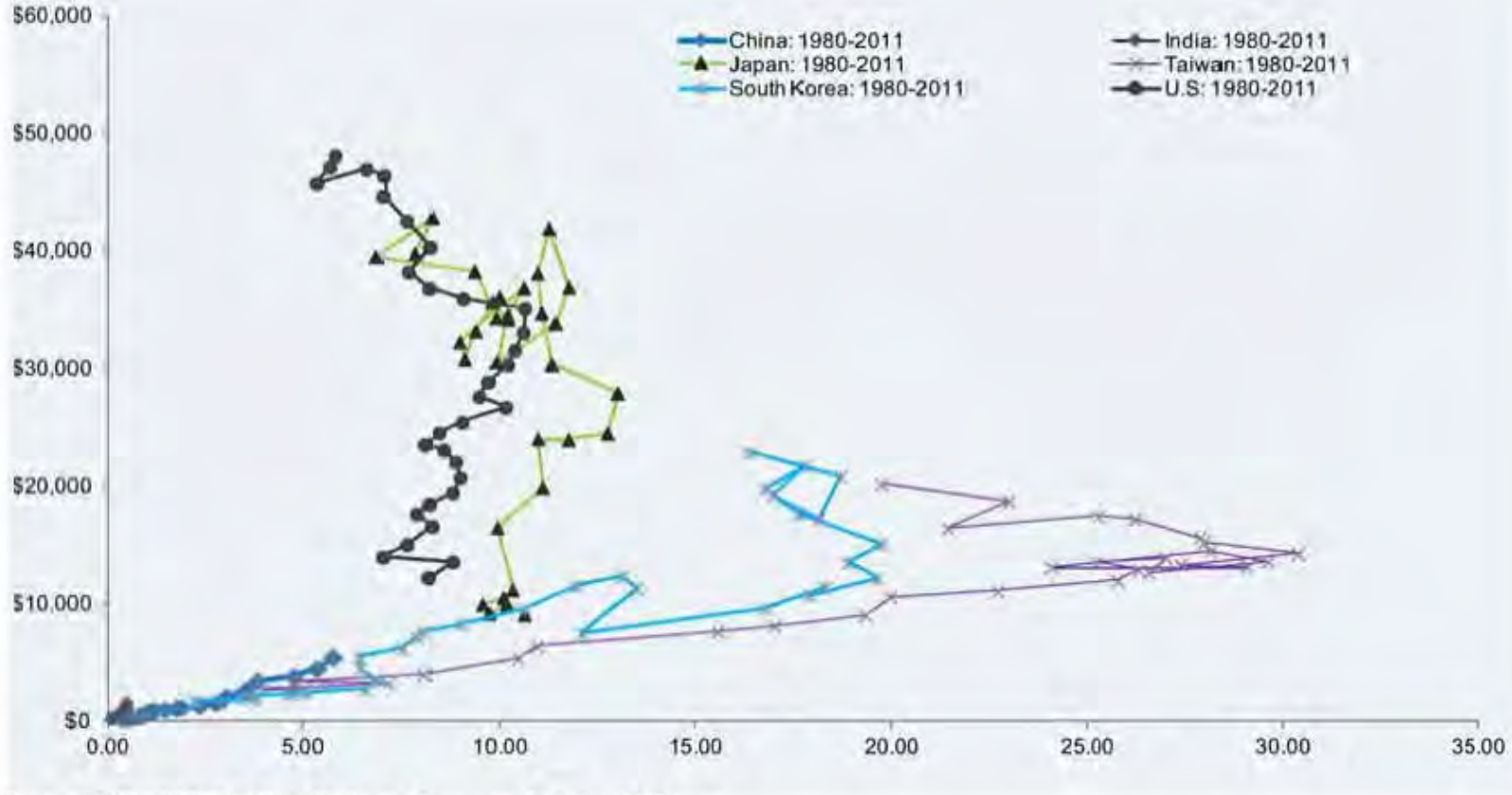
Source: Wood Mackenzie

The data for this chart can be found in Annex B-1

A-13: Copper consumption per capita is set for further takeoff in China as per capita income progresses toward $10,000. India is still in very early stages of copper intensity.

Refined copper use per capita plotted against real GDP per capita

Refined copper use per capita in kilograms (x-axis) plotted against real GDP per capita in US$2011 (y-axis)



Source: WBMS, USGS, LME, Wood Mackenzie, Government Statistics, J.P. Morgan

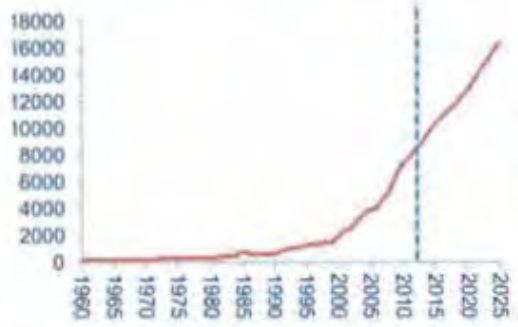
The data for this chart can be found in Annex B-11

ANNEX A

A-14: Trends in refined copper use by selected countries and regions.

China refined copper use

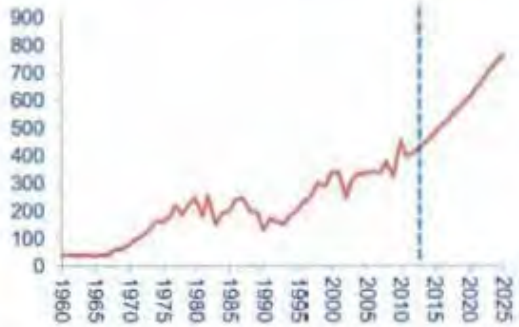
Thousand metric tonnes



Source: Wood Mackenzie

Brazil refined copper use

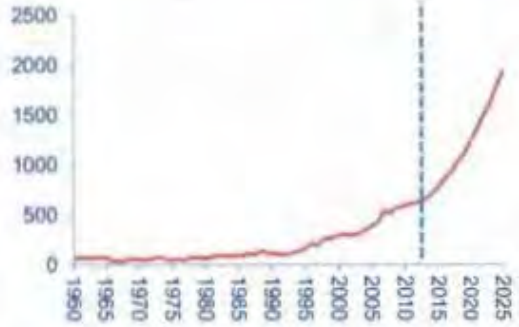
Thousand metric tonnes



Source: Wood Mackenzie

India refined copper use

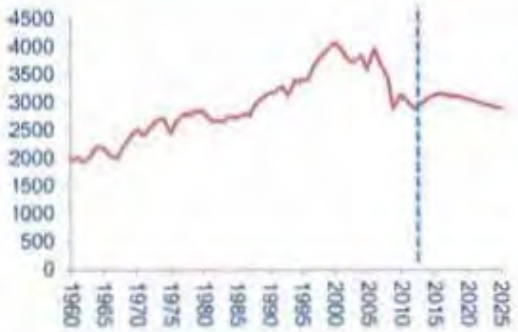
Thousand metric tonnes



Source: Wood Mackenzie

Western Europe refined copper use

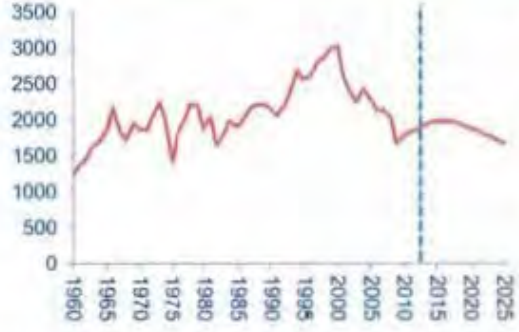
Thousand metric tonnes



Source: Wood Mackenzie

USA refined copper use

Thousand metric tonnes



Source: Wood Mackenzie

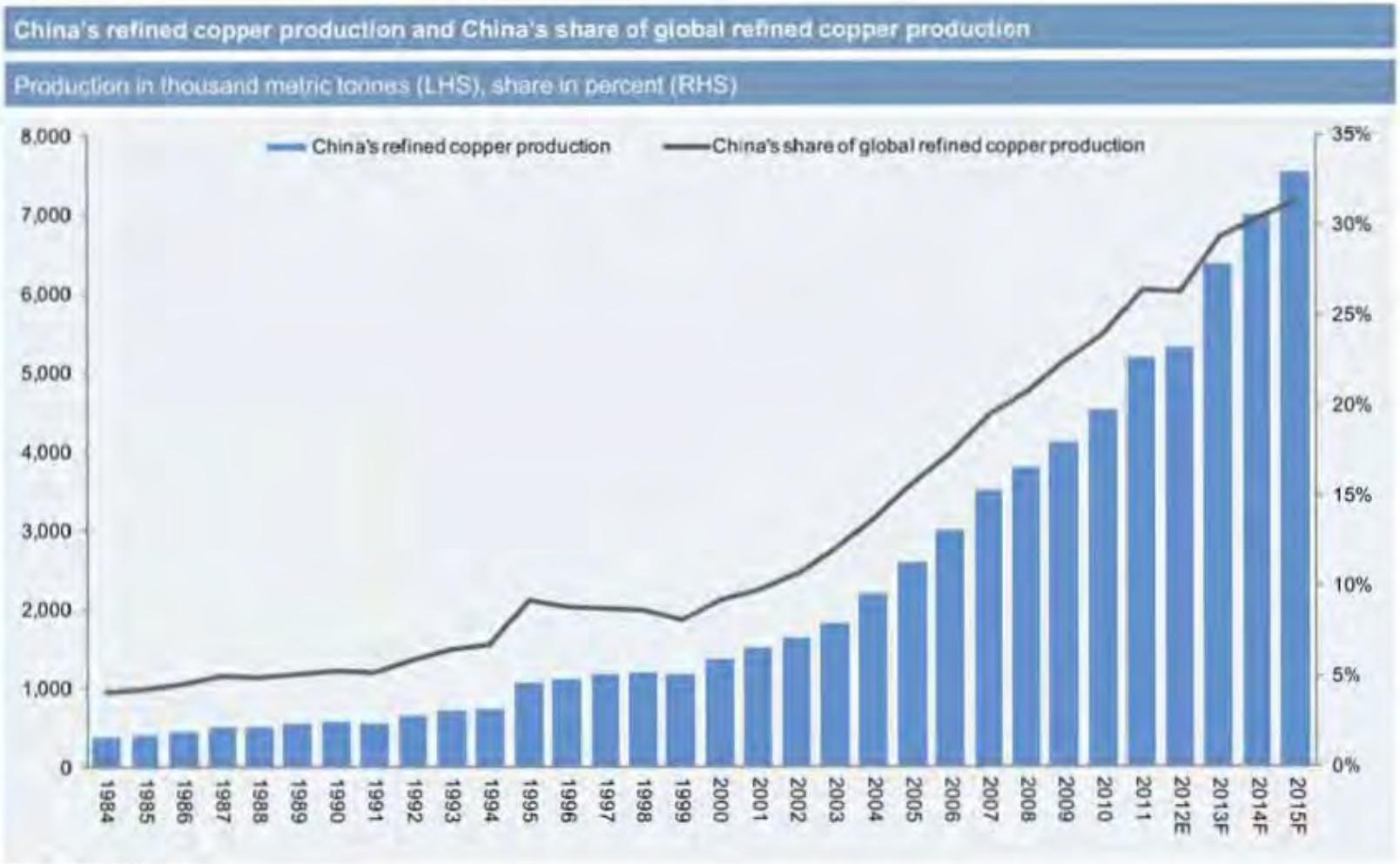
Japan refined copper use

Thousand metric tonnes

Source: Wood Mackenzie

The data for this chart can be found in Annex B-12

A-15: China's share of global refined copper production has grown from 9.7% in 2001 to 26.4% in 2011, and is likely to exceed 30% by 2014.



Source: Wood Mackenzie

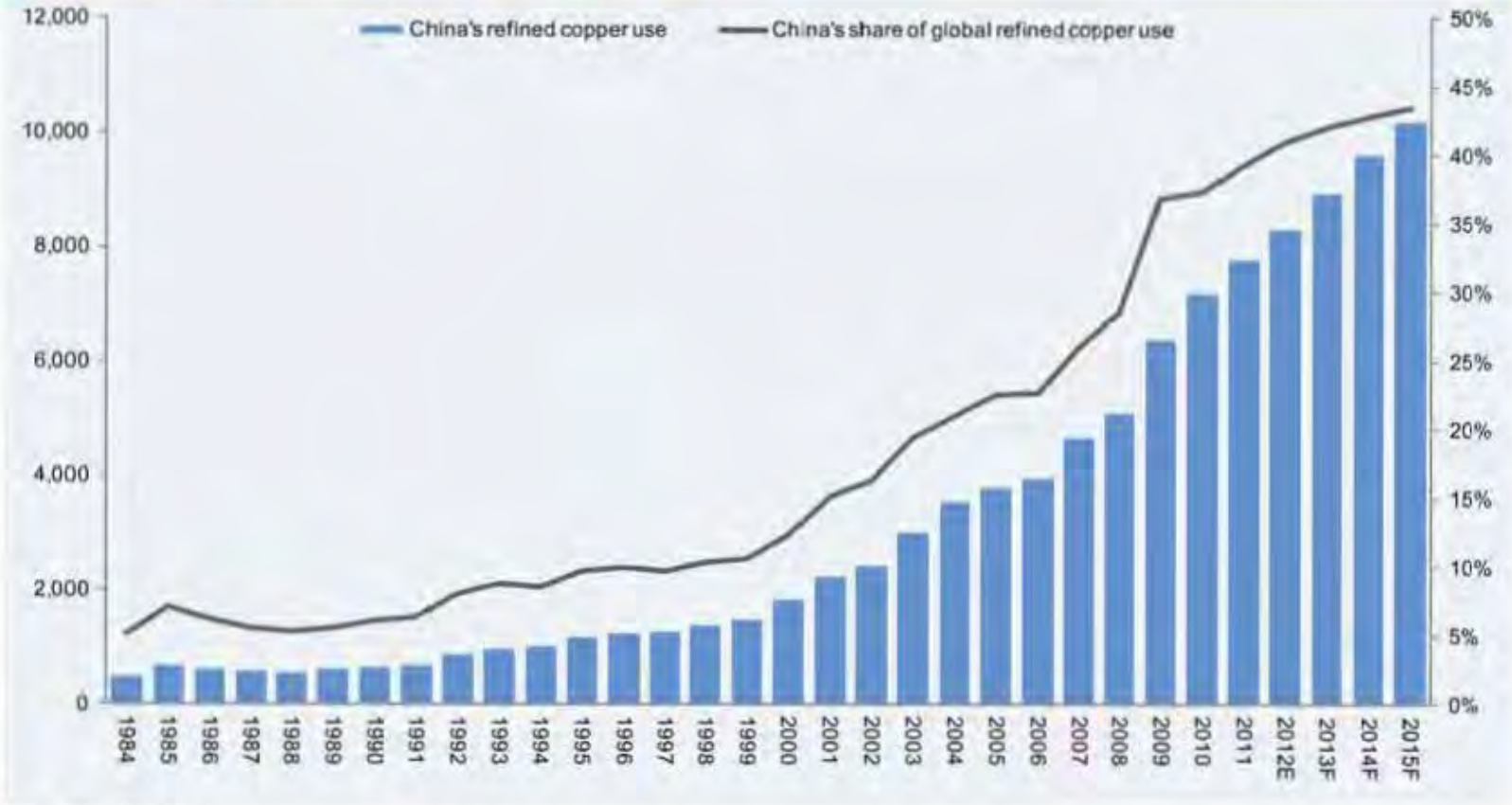
The data for this chart can be 'ound in Annex B-8

ANNEX A

A-16: China's share of global refined copper consumption has grown from 15.1% in 2001 to 39.3% in 2011, and is likely to exceed 40% going forward.

China's refined copper consumption and share of global refined copper use

Use in thousand metric tonnes (LHS), global share in percent (RHS)



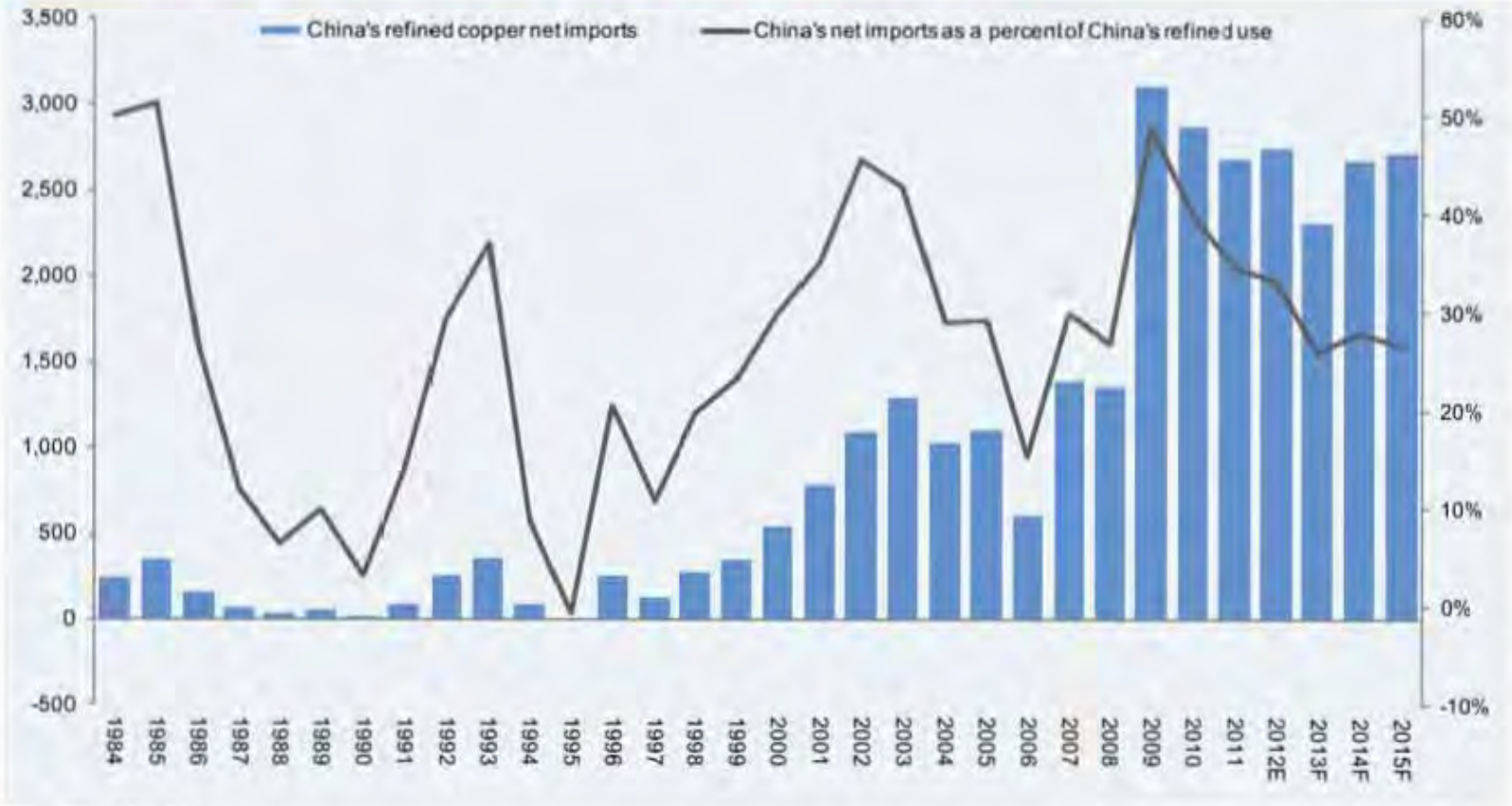
Source: Wood Mackenzie

The data for this chart can be found in Annex B-9

A-17: China's net imports of refined copper have averaged 36% of domestic refined use over the past 5 years. Increased use of scrap may lower refined import demand.

China's refined copper net imports and their share in meeting China's refined copper use

Net imports in thousand metric tonnes (LHS), share of domestic use in percent (RHS)

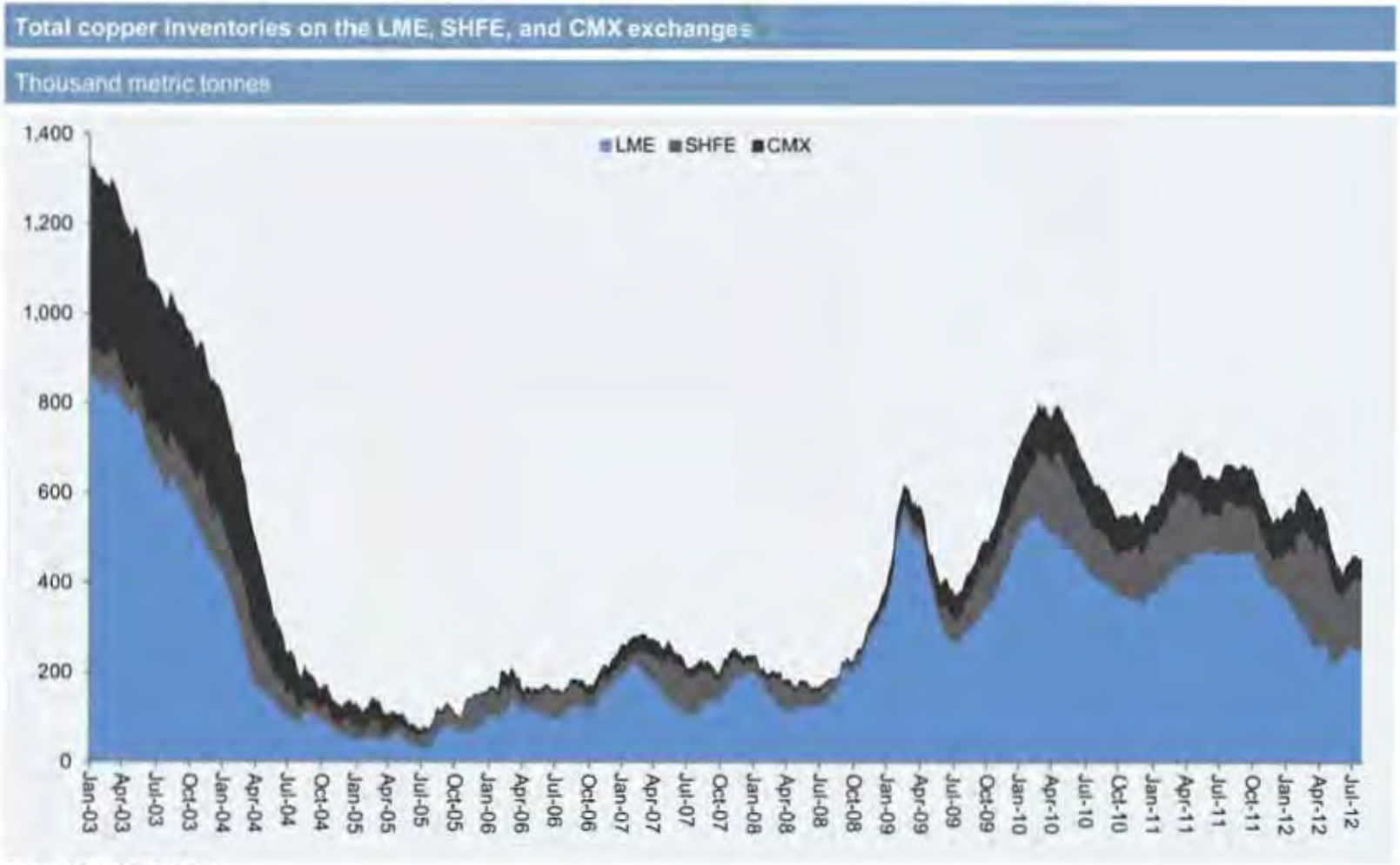


Source: Wood Mackenzie

The data for this chart can be found in Annex B-10

ANNEX A

A-18: Copper inventories on the LME, SHFE, and CMX exchanges.



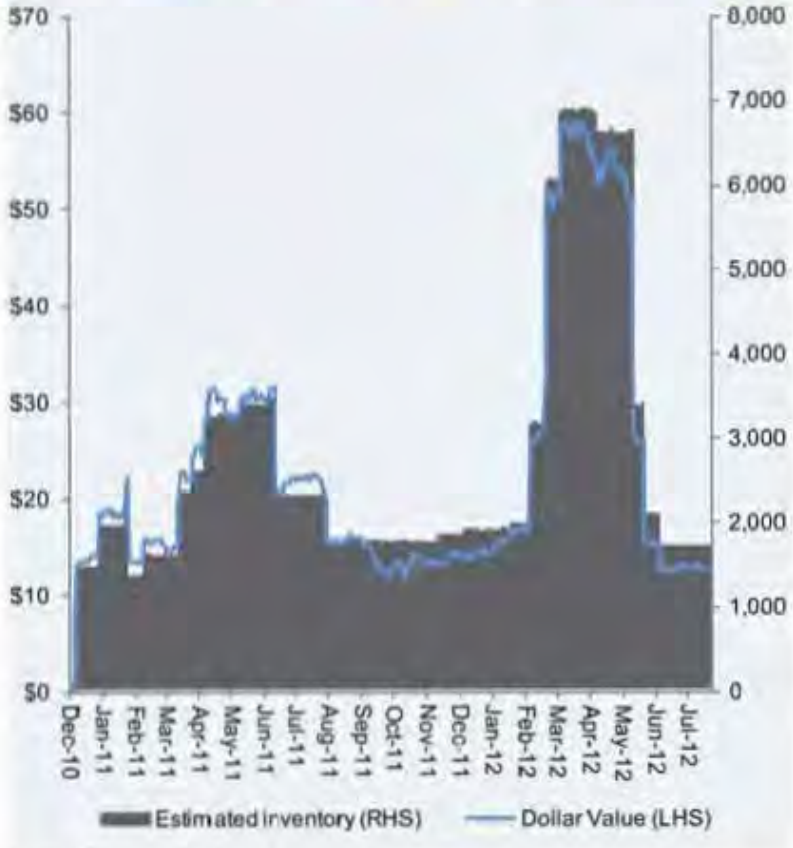
Source: LME, SHFE, CMX

The data for this chart can be found in Annex B-14

A-19: Market capitalizations of the ETFS physical copper ETF and the DB Physical Copper ETC.

Dollar value and estimated inventory held by the ETFS physical copper ETF

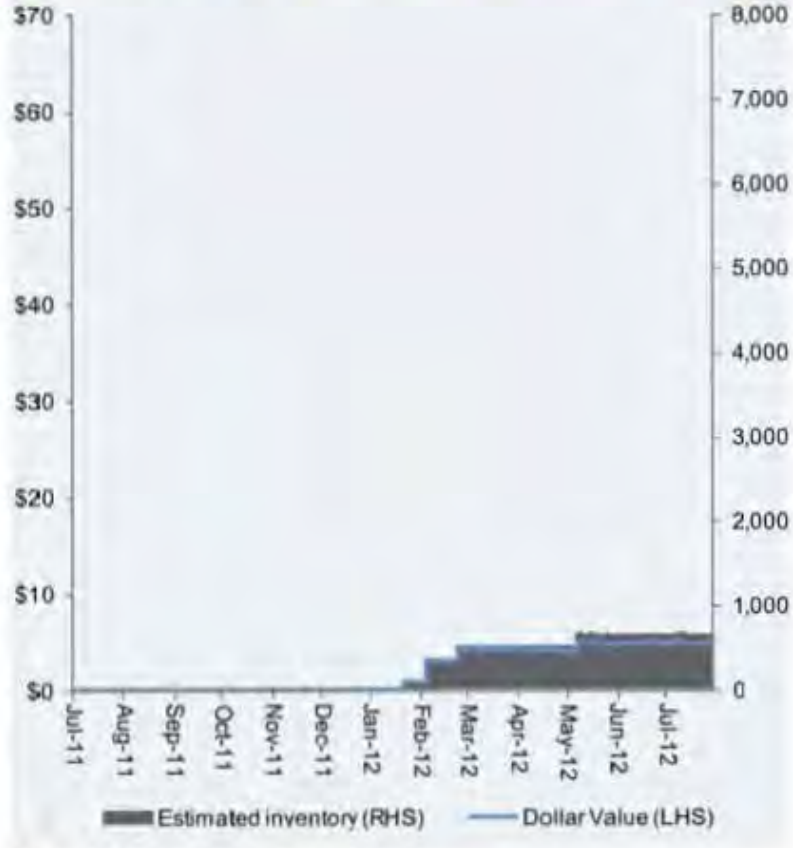
US$ millions (LHS), estimated stocks (metric tonnes, RHS)



Source: ETFS, LME, J.P. Morgan

Dollar value and estimated inventory held by the DB physical copper ETC

US$ millions (LHS), estimated stocks (metric tonnes, RHS)



Source: DB, LME, J.P. Morgan

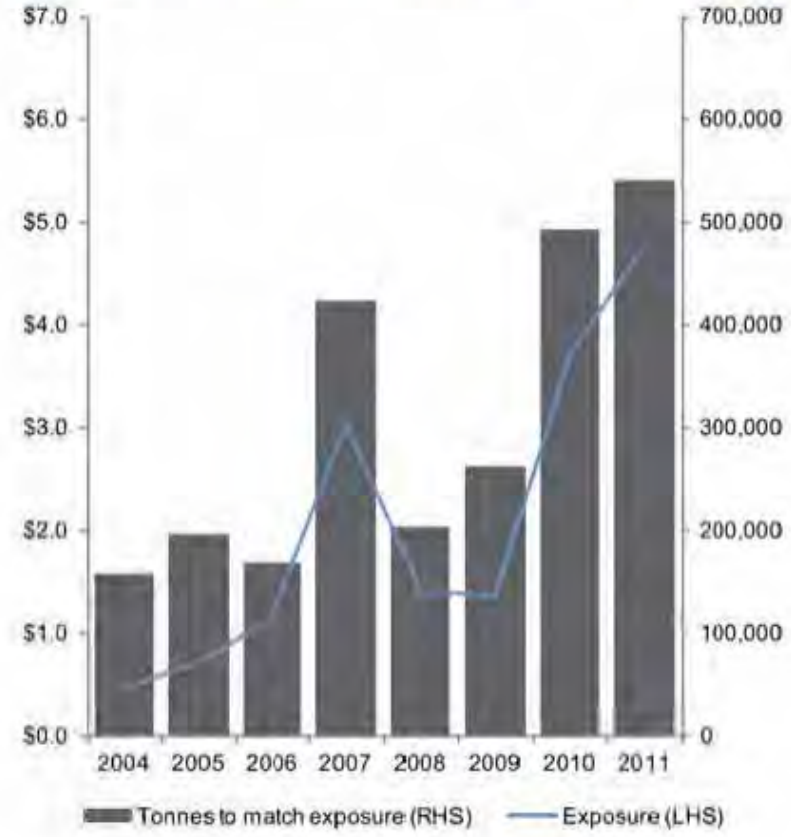
The data for this chart can be found in Annex B-15

ANNEX A

A-20: Estimated investment in copper price risk from financial instruments. S&P GSCI and DJ-UBS swaps do not hold physical LME or CMX inventories.

Estimated copper exposure in the S&P GSCI Index and quantity of tonnes required for same physical exposure

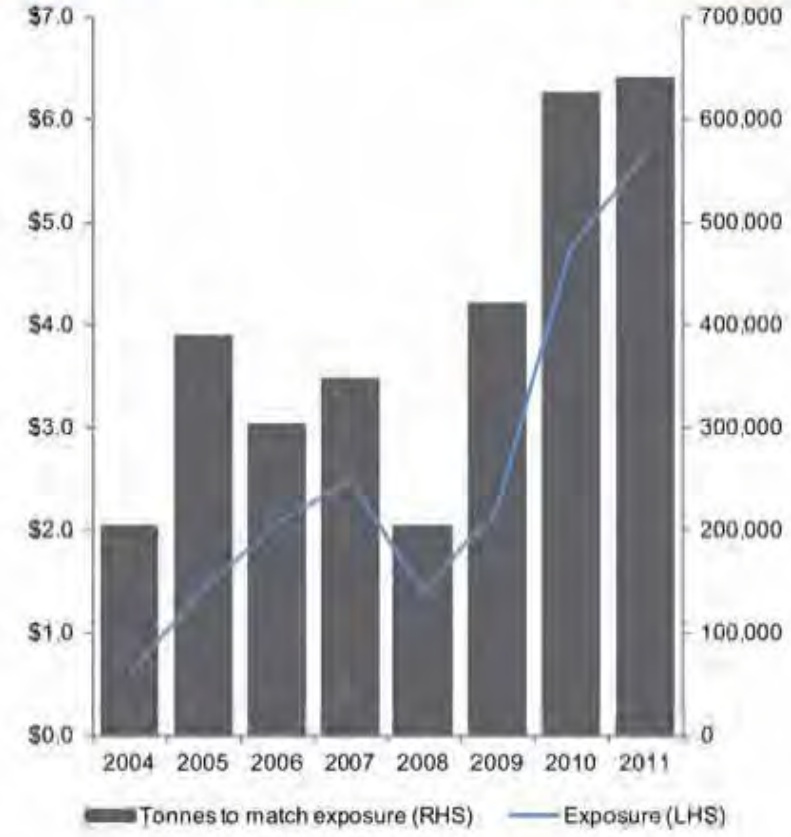
US$ billion (LHS), tonnes to match exposure (RHS)



Source: S&P, LME, J.P. Morgan

Estimated copper exposure in the DJ-UBS Index and quantity of tonnes required for same physical exposure

US$ billion (LHS), tonnes to match exposure(RHS)



Source: DJ-UBS, LME, J.P. Morgan

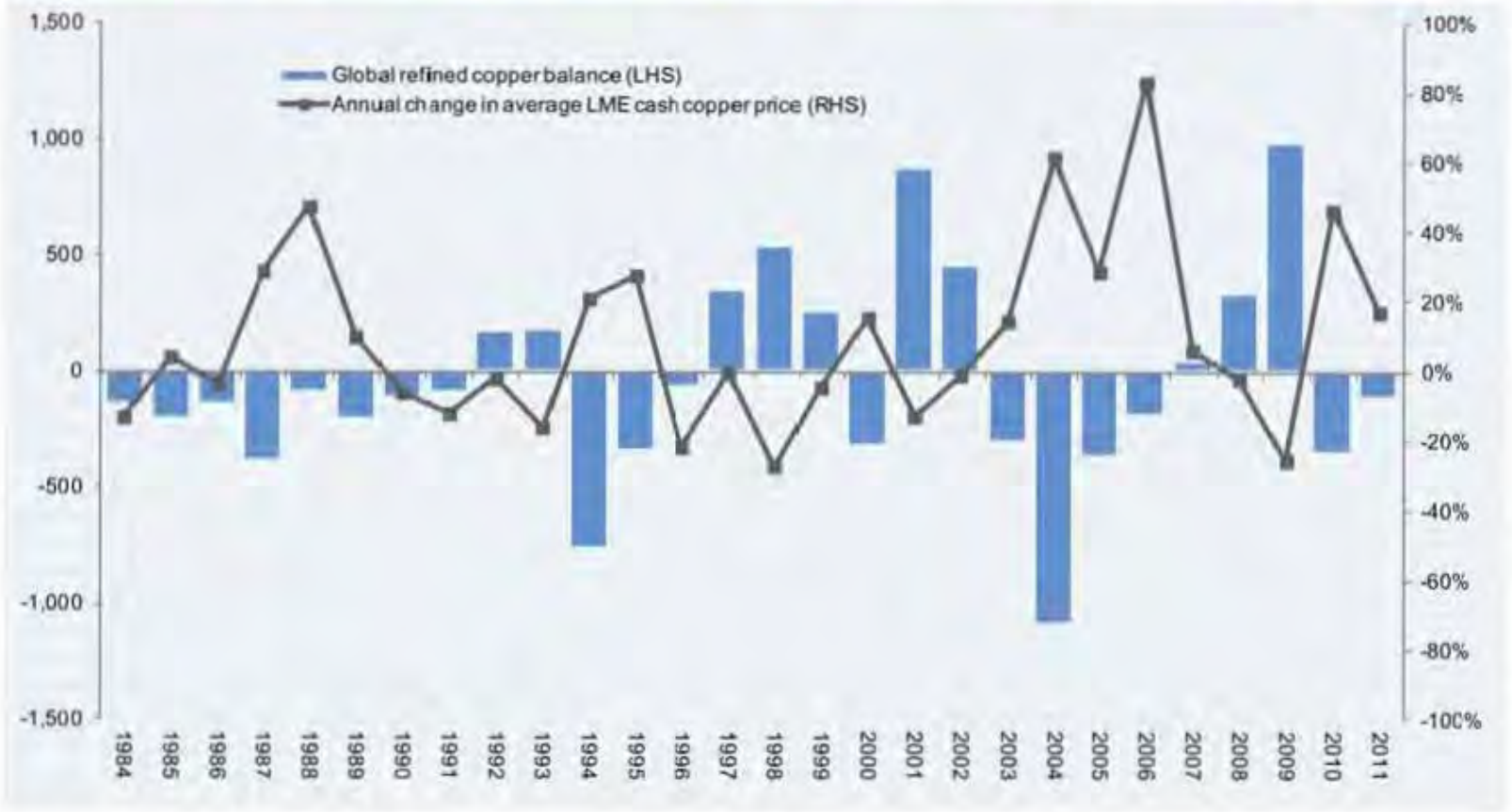
The data for this chart can be found in Annex B-16

ANNEX A

A-21: Global refined copper balance: consensus data show that use exceeded production for 2010 and 2011 after three years of surplus.

Global refined copper balance plotted against annual change in average cash LME copper prices

Balance in thousand metric tonnes (LHS), annual change in average cash LME copper prices in percent (RHS)



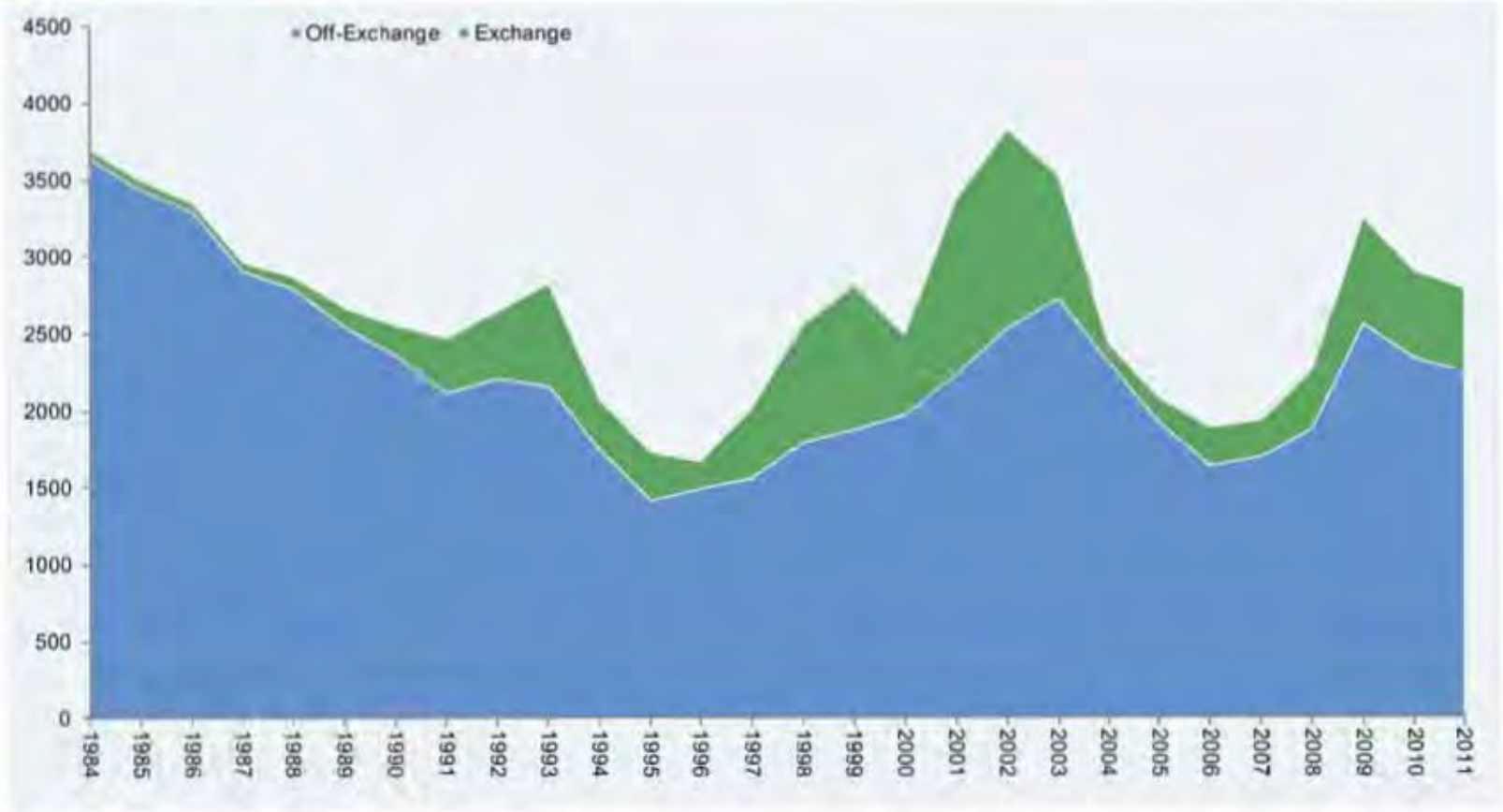
Source: Wood Mackenzie, LME

The data for this chart can be found in Annex B-17

A-22: Global unwrought refined copper inventories held off exchanges are substantially larger than exchange-held inventories.

Estimated global unwrought refined copper inventories

Thousand metric tonnes



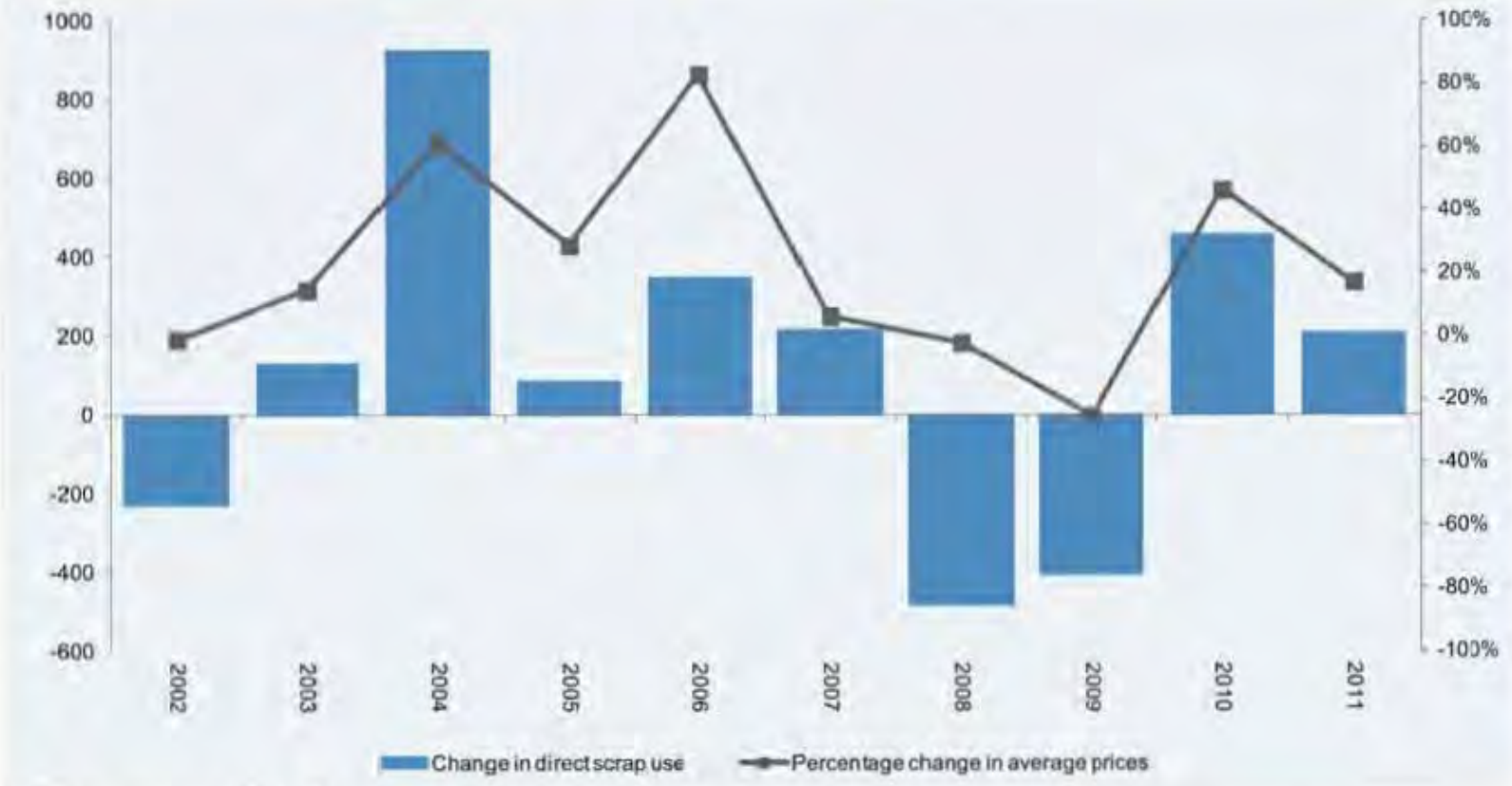
Source: Wood Mackenzie

The data for this chart can be found in Annex B-18

A-23: Scrap use is sensitive to price. As prices rise, more scrap is recovered, helping to moderate price appreciation by increasing immediately available supply.

Annual change in global direct copper scrap use plotted against annual changes in average LME cash copper prices

Change in scrap use in thousand metric tonnes (LHS), change in copper price in percent (RHS)



Source: Wood Mackenzie, LME, J.P. Morgan

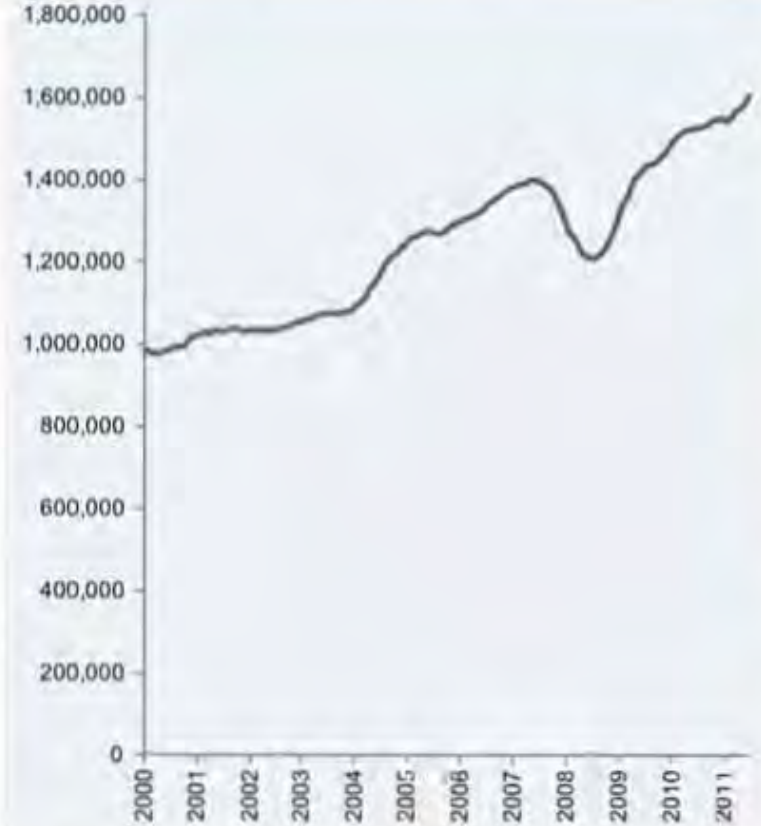
The data for this chart can be found in Annex B-19

ANNEX A

A-24: The copper content in automobiles currently in operation globally is equal to more than 16 million metric tonnes, or about 80% of annual refined production. The average life of copper in transportation uses is 10 years.

Estimated copper content in passenger cars and light trucks sold globally

Metric tonnes (rolling 12 month total)

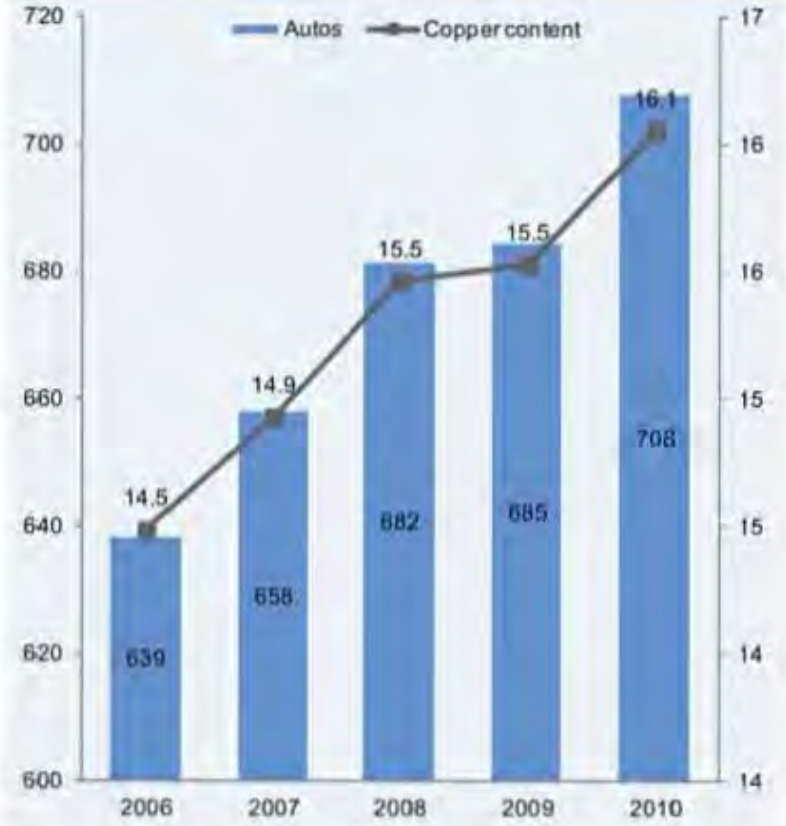


Source: Bloomberg, Copper Development Association, J.P. Morgan

The data for this chart can be found in Annex B-20

Automobiles in operation globally and estimated copper content

Million autos (LHS), copper content in million tonnes (RHS)



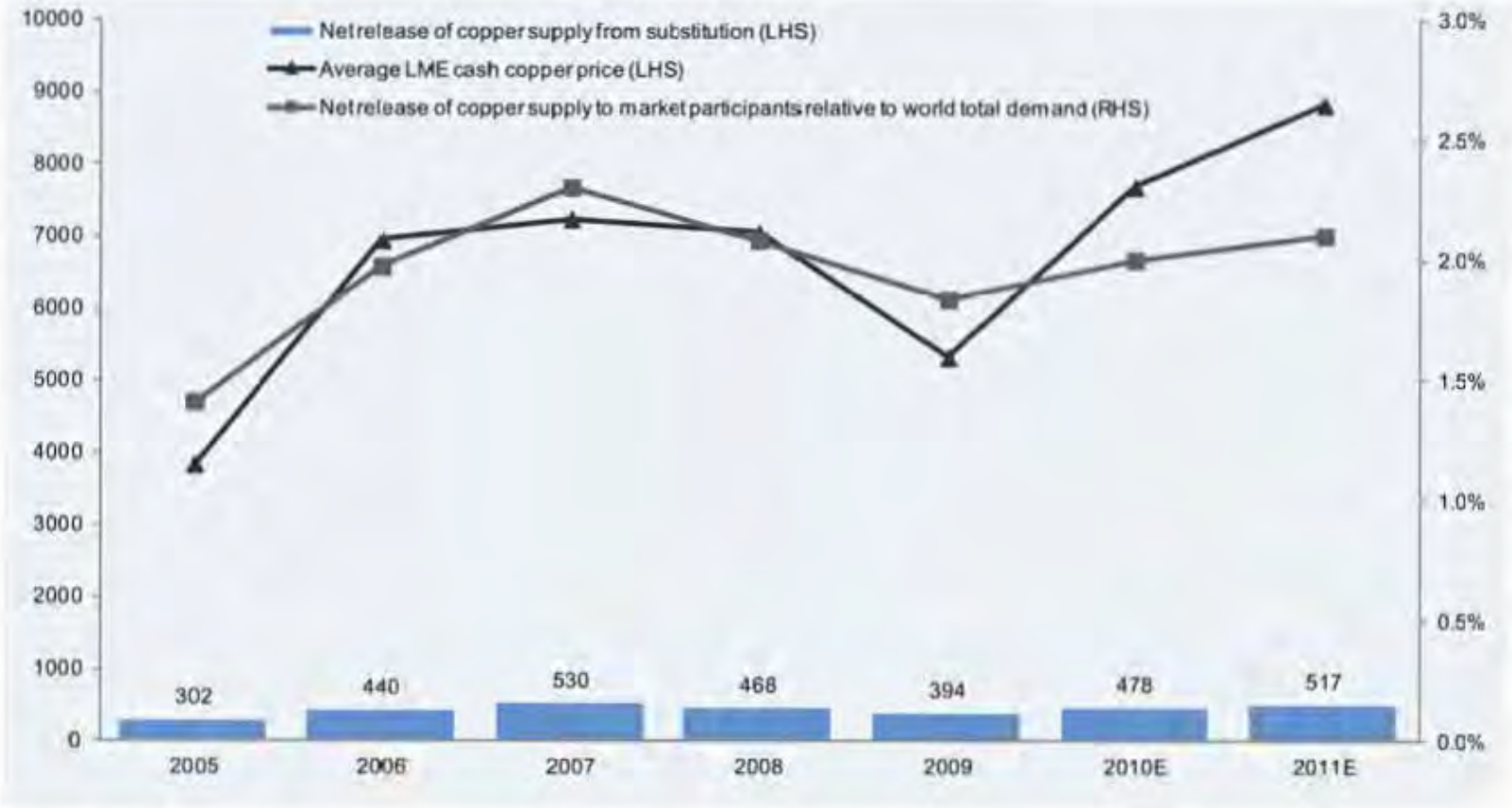
Source: WardsAuto, Copper Development Association, J.P. Morgan

ANNEX A

A-25: Structural substitution from copper has been averaging 2%-to-3% per year (about 400kmt), with over half of that loss to aluminum, on price competition.

Net release of copper supply from substitution effects generally increases when copper prices rise

Estimated net release of copper supply in thousand metric tonnes (LHS), average LME copper cash price in US$ per metric tonne (LHS), net demand relative to consumption in percent (RHS)



Source: Wood Mackenzie

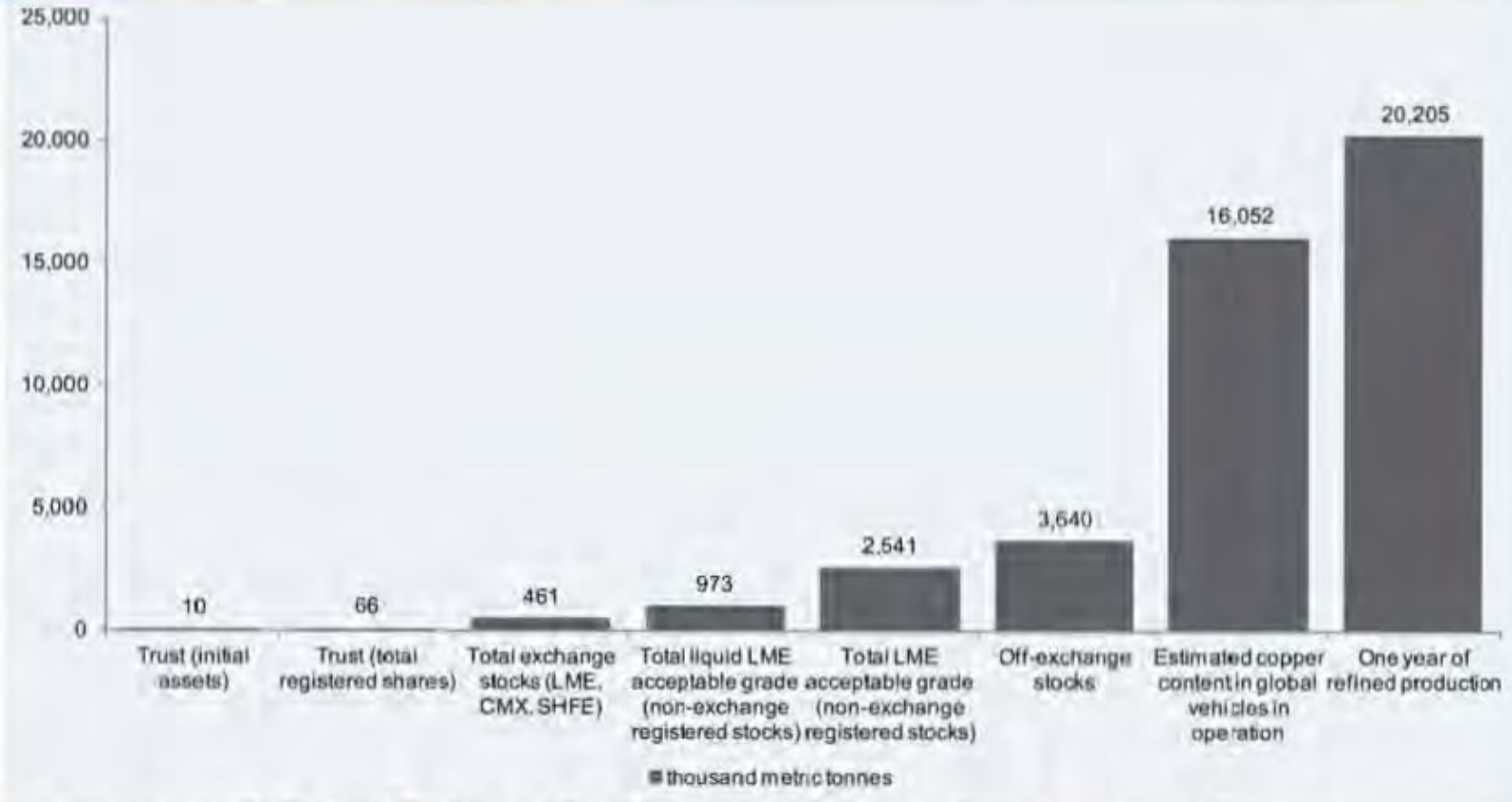
The data for this chart can be found in Annex B-13

ANNEX A

A-26: The proposed copper Trust holdings would represent a fraction of the global copper market.

The estimated inventory level of intended Trust holdings, in context of global inventories and annual production.

Thousand metric tonnes



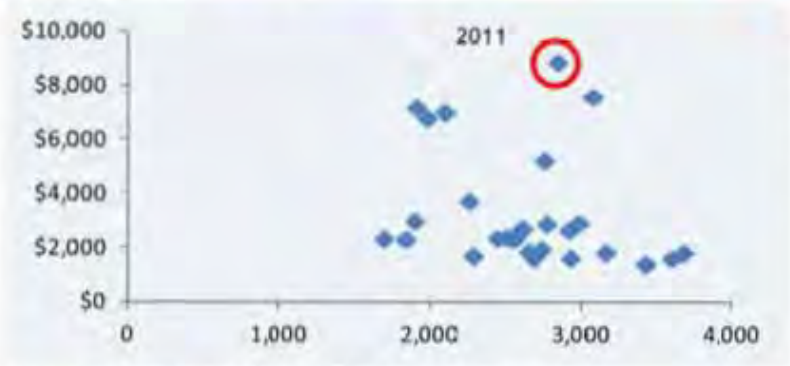
Source: Wood Mackenzie, LME, CMX, SHFE, Metal Bulletin, J.P. Morgan. Data as of 7/31/2012. Cars data as of 2010 (today would be higher).

The data for this chart can be found in Annex B-21

ANNEX A

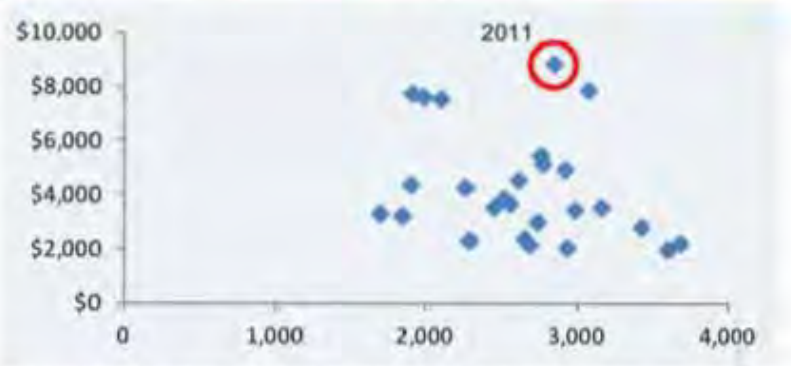
A-27: Cash copper prices have historically varied widely for any given level of global unwrought refined copper inventories because inventories do not exclusively set price.

Average cash price in nominal US$ per mt (y-axis), average global unwrought copper inventories in thousand metric tonnes (x-axis), (annual, 1984-2011)



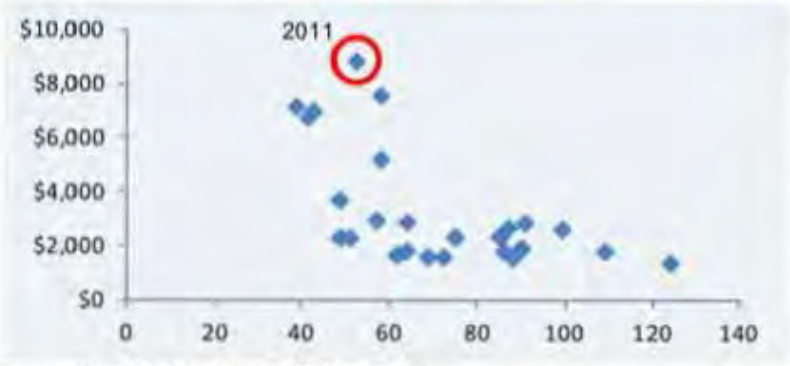
Source: Wood Mackenzie, LME, WBMS, J.P. Morgan

Average cash price in real terms ($2011) per mt (y-axis), average global unwrought copper inventories in thousand metric tonnes (x-axis), (annual, 1984-2011)



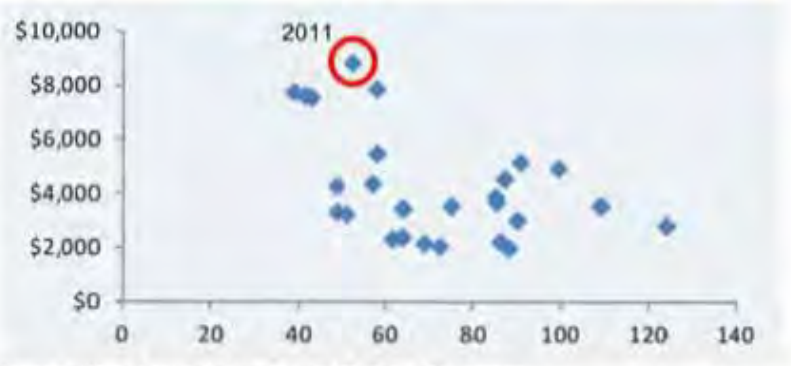
Source: Wood Mackenzie, LME, WBMS, BLS, J.P. Morgan

Average cash price in nominal US$ per mt (y-axis), average global unwrought copper inventories in days of global demand coverage (x-axis) , (annual, 1984-2011)



Source: Wood Mackenzie, LME, WBMS, J.P. Morgan

Average cash price in real terms ($2011) per mt (y-axis), average global unwrought copper inventories in days of global demand coverage (x-axis) , (annual, 1984-2011)



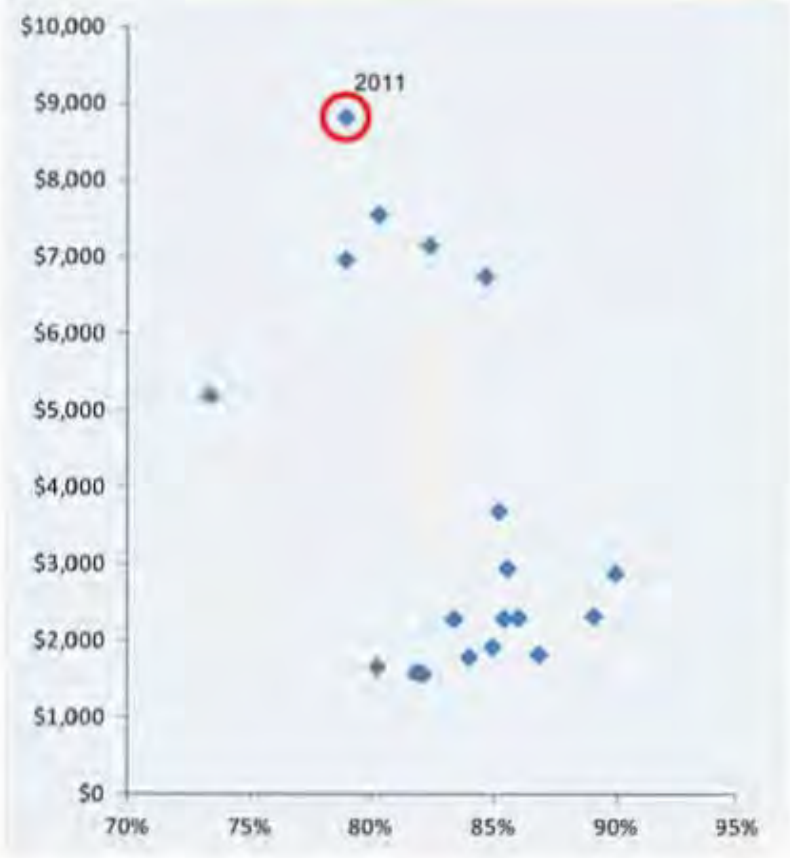
Source: Wood Mackenzie, LME, WBMS, BLS, J.P. Morgan

The data for this chart can be found in Annex B-22

ANNEX A

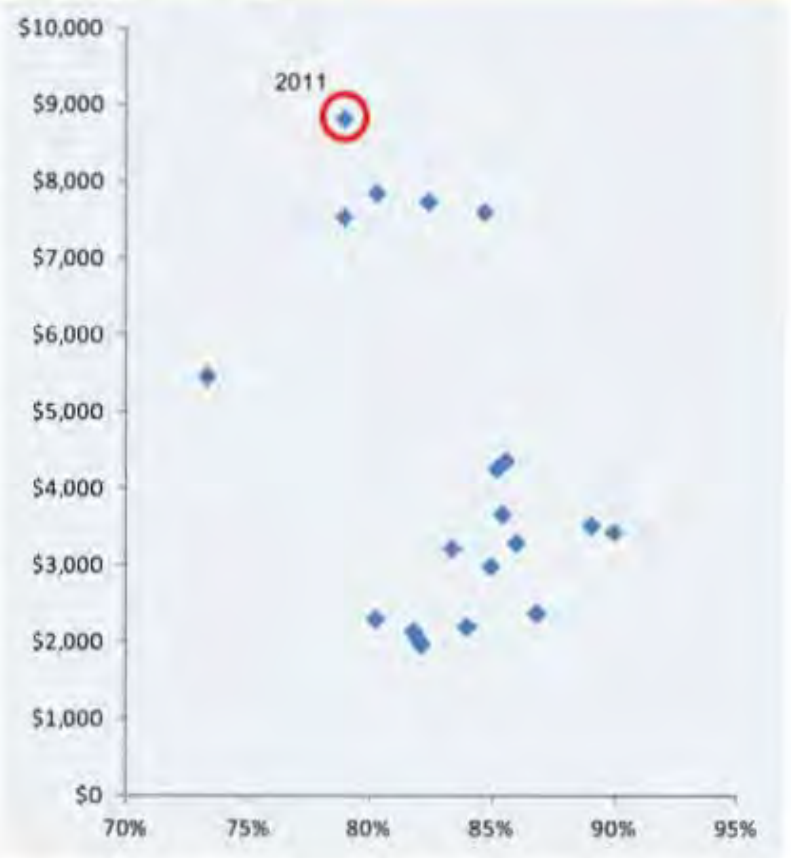
A-28: Cash copper prices have historically varied widely for any given rate of global refined copper capacity utilization because utilization rates do not exclusively set price.

Average cash price in nominal US$ per mt (y-axis), average global refined copper capacity utilization in percent (x-axis), (annual, 1984-2011)



Source: Wood Mackenzie, LME, WBMS, J.P. Morgan

Average cash price in real terms ($2011) per mt (y-axis), average global refined copper capacity utilization in percent (x-axis), (annual, 1984-2011)

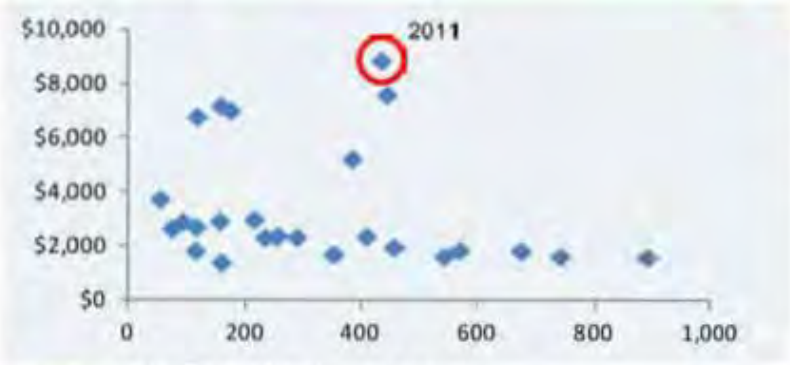


Source: Wood Mackenzie, LME, WBMS, BLS, J.P. Morgan

The data for this chart can be found in Annex B-22

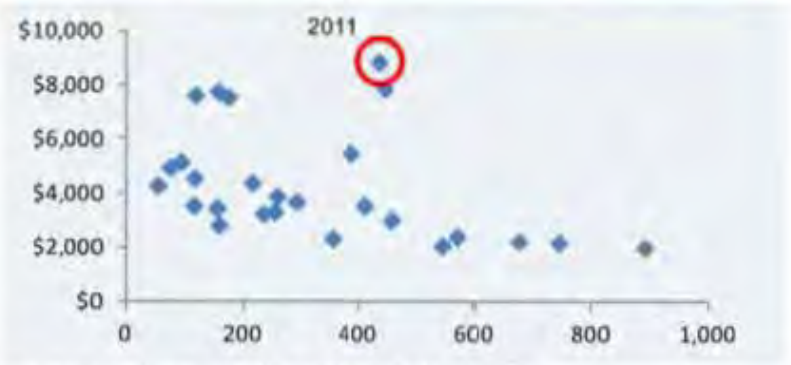
A-29: Cash copper prices have historically varied widely for any given level of total LME copper inventories because inventories do not exclusively set price.

Average cash price in nominal US$ per mt (y-axis), average total LME copper inventories in thousand metric tonnes (x-axis), (annual, 1984-2011)



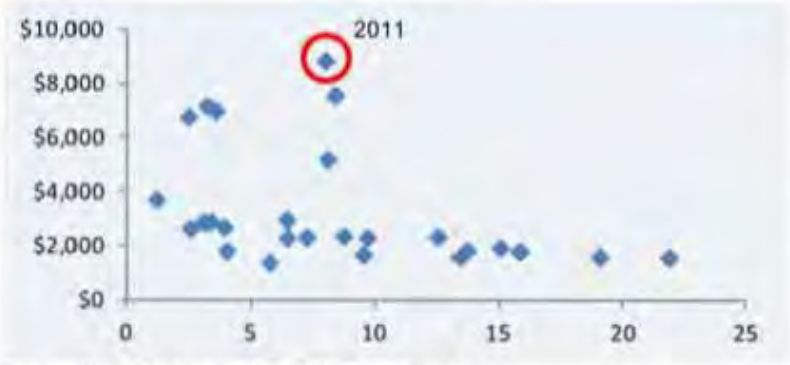
Source: Wood Mackenzie, LME, WBMS, J.P. Morgan

Average cash price in real terms ($2011) per mt (y-axis), average total LME copper inventories in thousand metric tonnes (x-axis), (annual, 1984-2011)



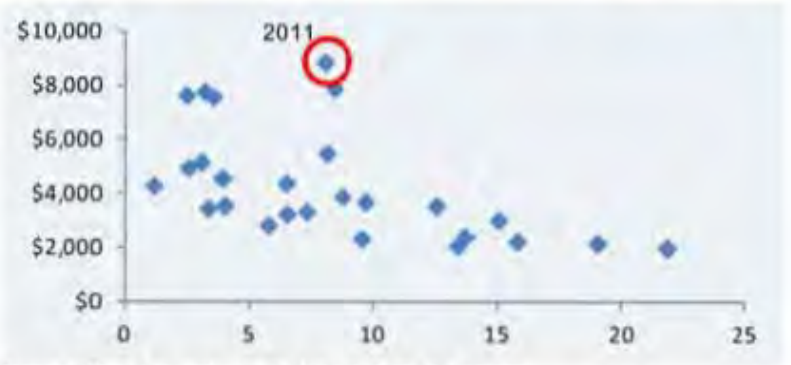
Source: Wood Mackenzie, LME, WBMS, BLS, J.P. Morgan

Average cash price in nominal US$ per mt (y-axis), average total LME copper inventories in days of global demand coverage (x-axis), (annual, 1984-2011)



Source: Wood Mackenzie, LME, WBMS, J.P. Morgan

Average cash price in real terms ($2011) per mt (y-axis), average total LME copper inventories in days of global demand coverage (x-axis), (annual, 1984-2011)



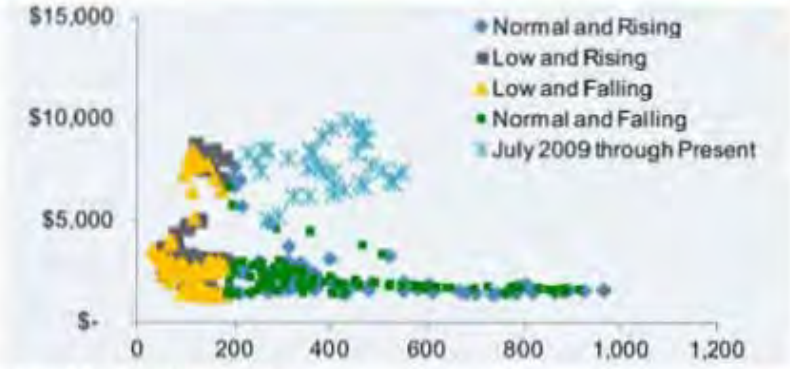
Source: Wood Mackenzie, LME, WBMS, BLS, J.P. Morgan

The data for this chart can be found in Annex B-22

ANNEX A

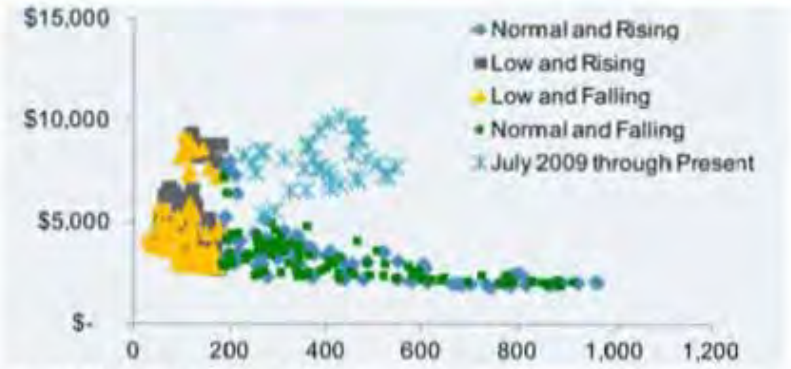
A-30: Monthly LME cash copper prices plotted against total LME copper stocks by inventory regime (January 1980 – July 2012).

Monthly average price in nominal US$ per mt (y-axis), monthly average total LME stocks in thousand metric tonnes (x-axis). Low = < 180 kmt.



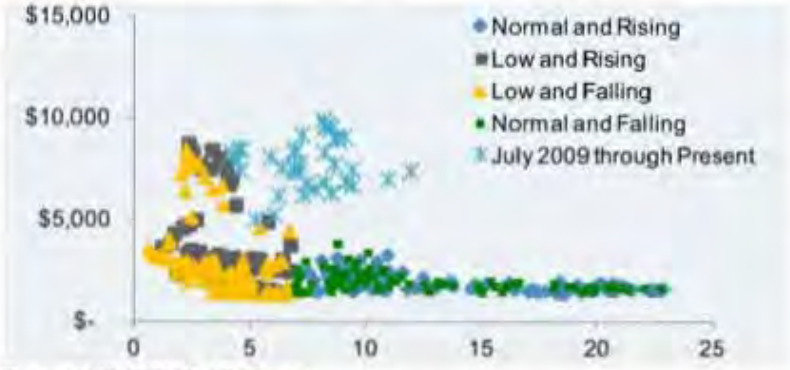
Source: LME, WBMS, J.P. Morgan

Monthly average price per mt in real terms (US$ July 2011) (y-axis), monthly average total LME stocks in thousand metric tonnes (x-axis). Low = < 180 kmt.



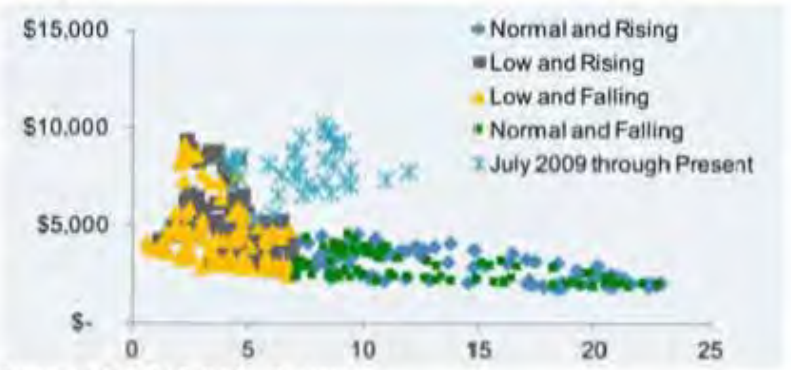
Source: LME, WBMS, BLS, J.P. Morgan

Monthly average price in nominal USD per mt (y-axis), monthly average global demand coverage in days afforded by total LME stocks (x-axis). Low = < 7 days.



Source: LME, WBMS, J.P. Morgan

Monthly average price per mt in real terms (US$ July 2011) (y-axis), monthly average global demand coverage in days afforded by total LME stocks (x-axis). Low = < 7 days.



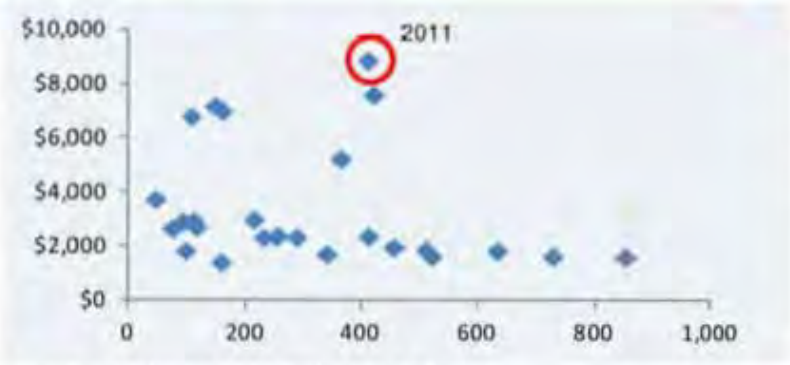
Source: LME, WBMS, BLS, J.P. Morgan

The data for this chart is the data shown in Annex B-22 at monthly frequency

ANNEX A

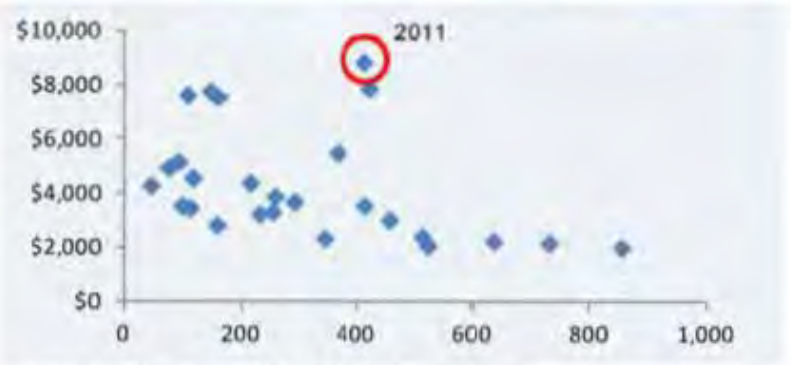
A-31: Cash copper prices have historically varied widely for any given level of on-warrant LME copper inventories because inventories do not exclusively set price.

Average cash price in nominal US$ per mt (y-axis), average on-warrant LME copper inventories in thousand metric tonnes (x-axis), (annual, 1984-2011)



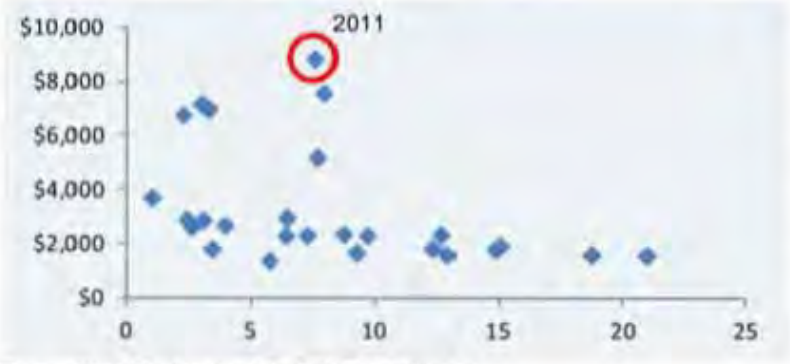
Source: Wood Mackenzie, LME, WBMS, J.P. Morgan

Average cash price in real terms ($2011) per mt (y-axis), average on-warrant LME copper inventories in thousand metric tonnes (x-axis), (annual, 1984-2011)



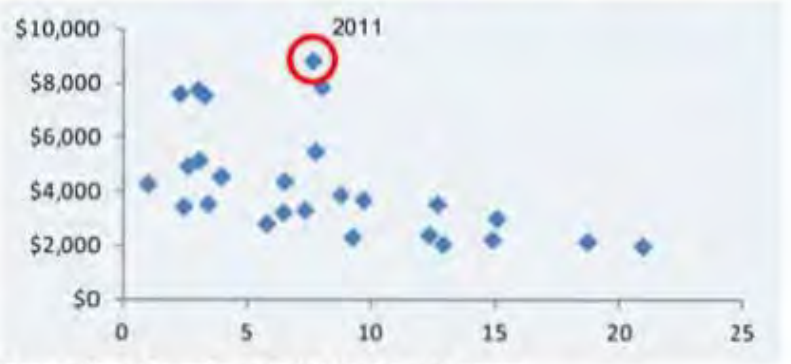
Source: Wood Mackenzie, LME, WBMS, BLS, J.P. Morgan

Average cash price in nominal US$ per mt (y-axis), average on-warrant LME copper inventories in days of global demand coverage (x-axis), (annual, 1984-2011)



Source: Wood Mackenzie, LME, WBMS, J.P. Morgan

Average cash price in real terms ($2011) per mt (y-axis), average on-warrant LME copper inventories in days of global demand coverage (x-axis), (annual, 1984-2011)



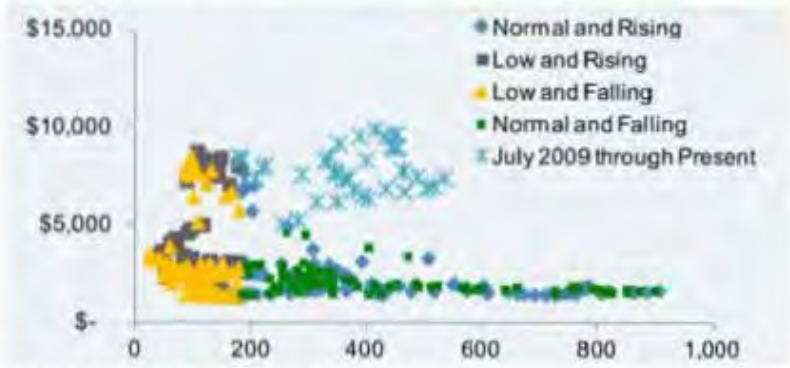
Source: Wood Mackenzie, LME, WBMS, BLS, J.P. Morgan

The data for this chart can be found in Annex B-22

ANNEX A

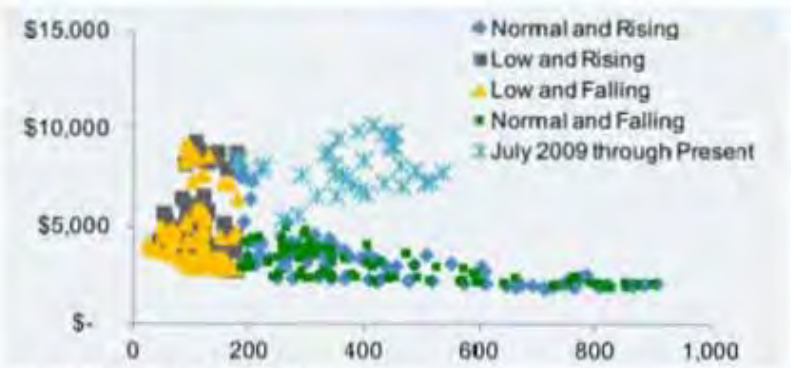
A-32: Monthly LME cash copper prices plotted against on-warrant LME copper stocks by inventory regime (January 1980 – July 2012).

Monthly average price in nominal US$ per mt (y-axis), monthly average on-warrant LME stocks in thousand metric tonnes (x-axis). Low = < 180 kmt.



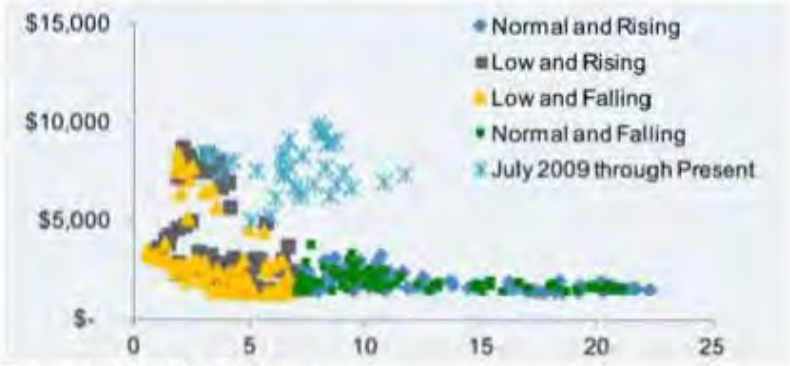
Source: LME, WBMS, J.P. Morgan

Monthly average price per mt in real terms (US$ July 2011) (y-axis), monthly average on-warrant LME stocks in thousand metric tonnes (x-axis). Low= < 180 kmt.



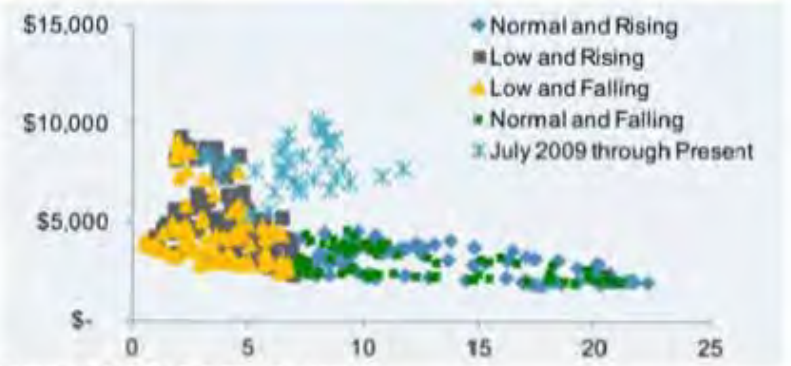
Source: LME, WBMS, BLS, J.P. Morgan

Monthly average price in nominal US$ per mt (y-axis), monthly average global demand coverage in days afforded by on-warrant LME stocks (x-axis). Low = < 7 days.



Source: LME, WBMS, J.P. Morgan

Monthly average price per mt in real terms (US$ July 2011) (y-axis), monthly average global demand coverage in days afforded by on-warrant LME stocks (x-axis). Low = < 7 days.



Source: LME, WBMS, BLS, J.P. Morgan

The data for this chart is the data shown in Annex **B**-22 at monthly frequency

A-33: In the first half of 2009, China doubled its annual copper imports to a monthly average of about 315 thousand metric tonnes at the cyclical low price, in anticipation of future use.

China's monthly imports of unwrought refined copper in quantity and dollar terms

Monthly import quantity in thousand metric tonnes (LHS), nominal value of monthly imports in US$ million (RHS)

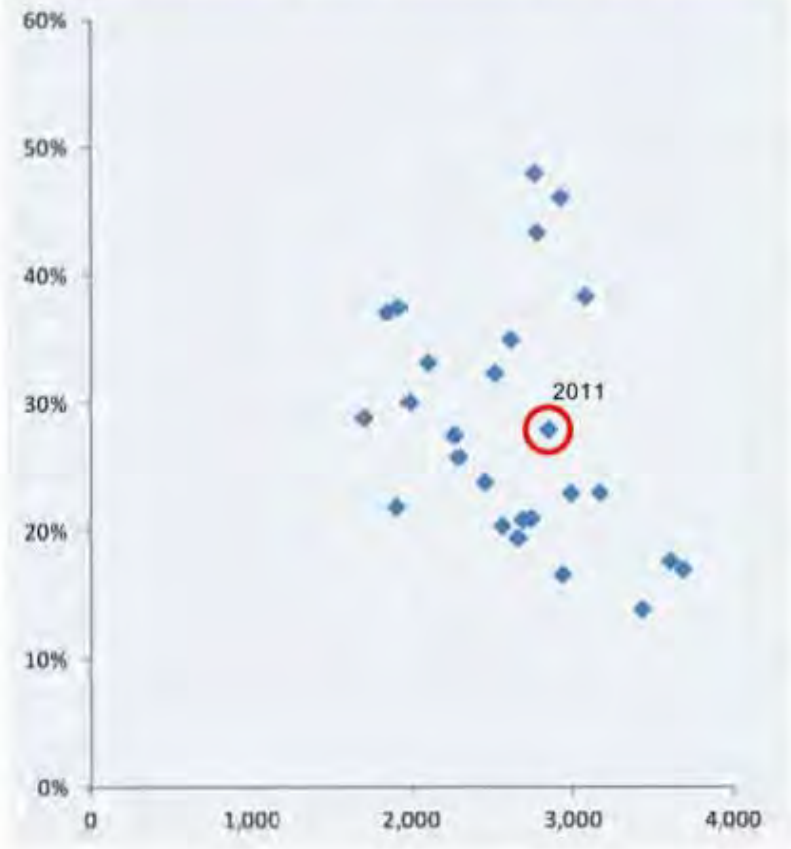
Source: China Customs, LME, J.P. Morgan

The data for this chart can be 'ound in Annex B-23

ANNEX A

A-34: Realized volatility of cash copper prices have historically varied widely for any given level of global unwrought refined copper inventories because inventories do not exclusively determine price volatility.

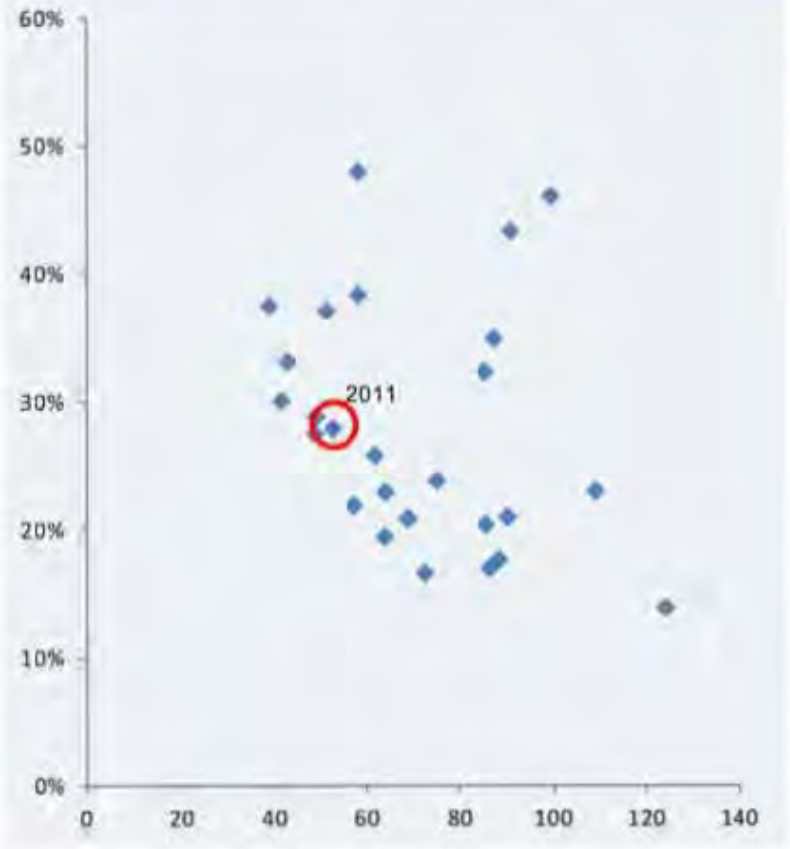
Annualized realized volatility of cash LME copper in percent (y-axis), average global unwrought copper inventories in thousand metric tonnes (x-axis), (annual, 1984-2011)



Source: Wood Mackenzie, LME, WBMS, J.P. Morgan

The data for this chart can be found in Annex B-22

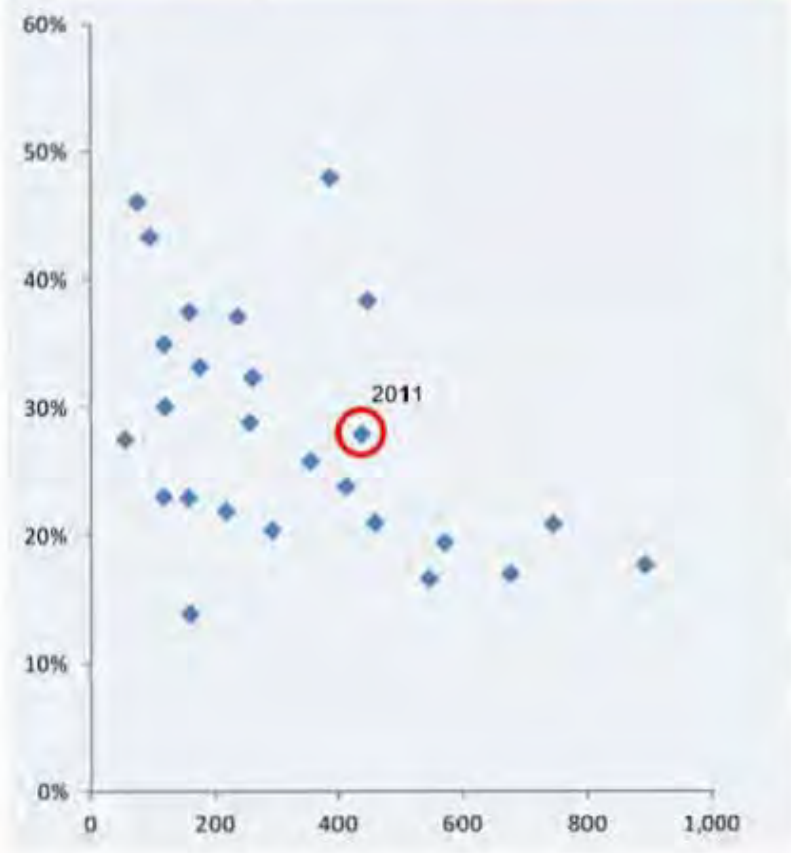
Annualized realized volatility of cash LME copper in percent (y-axis), average global unwrought copper inventories in days of global demand coverage (x-axis), (annual, 1984-2011)



Source: Wood Mackenzie, LME, WBMS, J.P. Morgan

A-35: Realized volatility of cash copper prices have historically varied widely for any given level of total LME copper inventories because inventories do not exclusively determine price volatility.

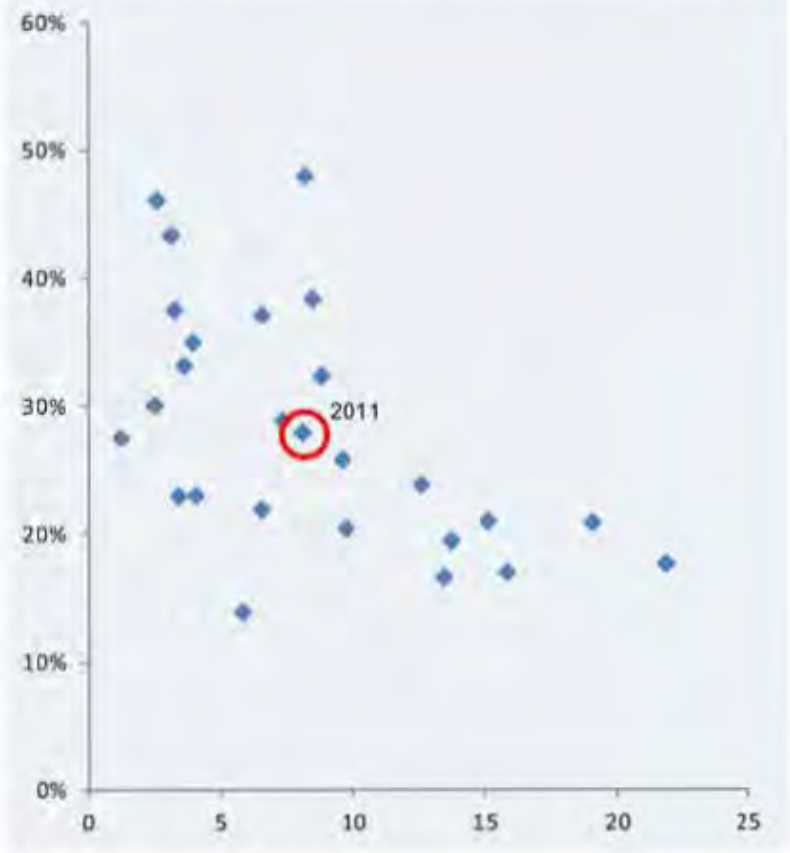
Annualized realized volatility of cash LME copper in percent (y-axis), average total LME copper inventories in thousand metric tonnes (x-axis), (annual, 1984-2011)



Source: Wood Mackenzie, LME, J.P. Morgan

The data for this chart can be found in Annex B-22

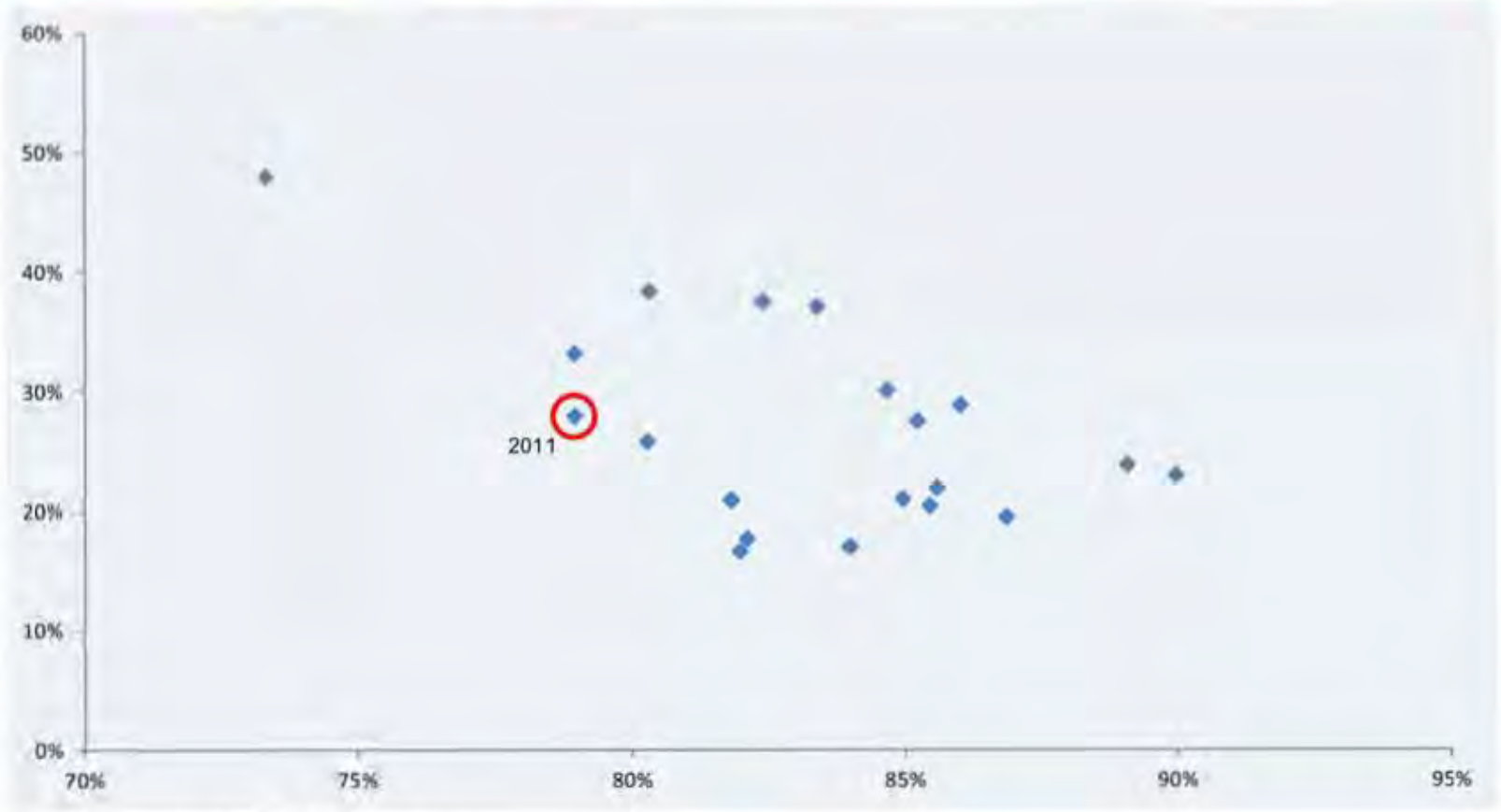
Annualized realized volatility of cash LME copper in percent (y-axis), average total LME copper inventories in days of global demand coverage (x-axis), (annual, 1984-2011)



Source: Wood Mackenzie, LME, J.P. Morgan

A-36: Realized volatility of cash copper prices have historically varied widely for any given rate of global refined copper production capacity utilization because utilization rates do not exclusively determine price volatility.

Annualized realized volatility of cash LME copper in percent (y-axis), average global refined copper production capacity utilization in percent (x-axis), (annual, 1984-2011)

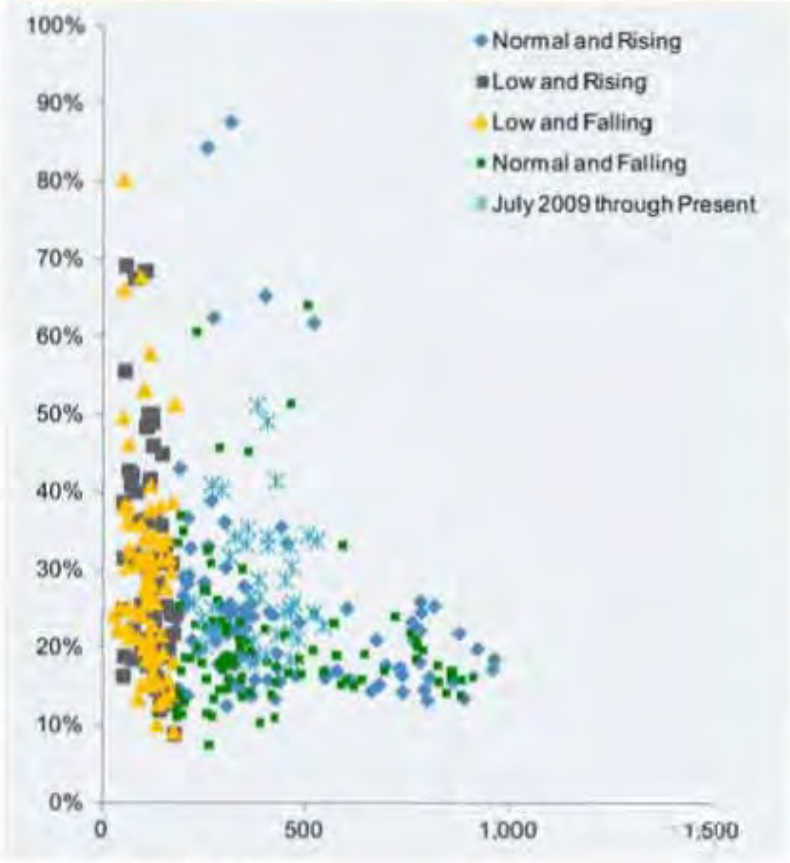


Source: Wood Mackenzie, LME, WBMS, J.P. Morgan

The data for this chart can be found in Annex B-22

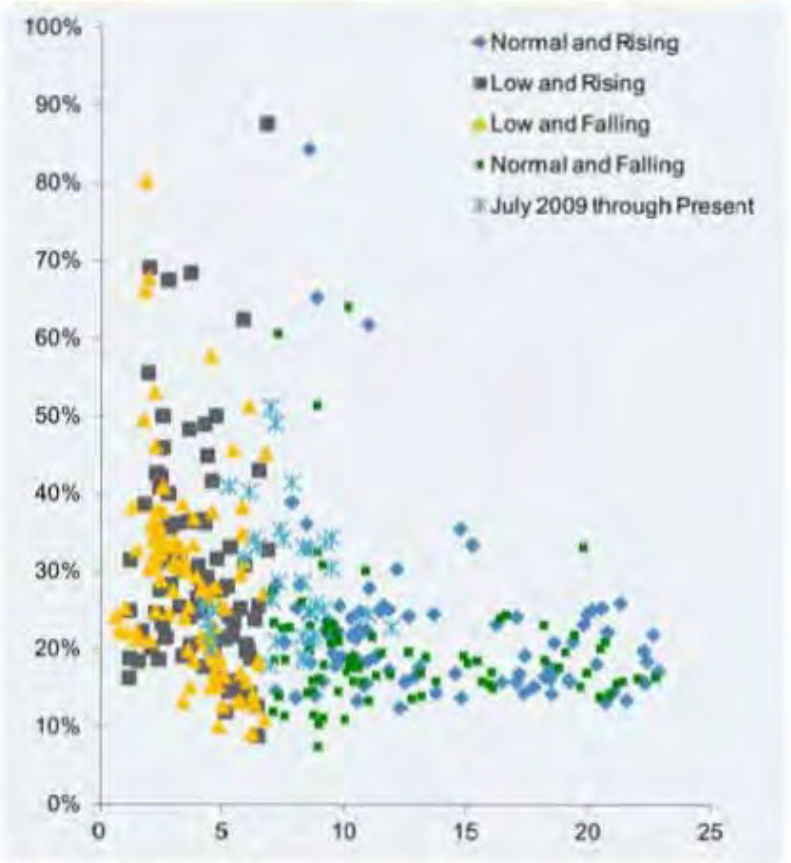
A-37: Monthly LME cash copper realized volatility plotted against total LME copper stocks by inventory regime (January 1980 – July 2012).

Annualized realized volatility of cash LME copper in percent (y-axis), monthly average total LME stocks in thousand metric tonnes (x-axis). Low = < 180 kmt.



Source: LME, WBMS, J.P. Morgan

Annualized realized volatility of cash LME copper in percent (y-axis), monthly average global demand coverage in days afforded by total LME stocks (x-axis). Low = < 7 days.

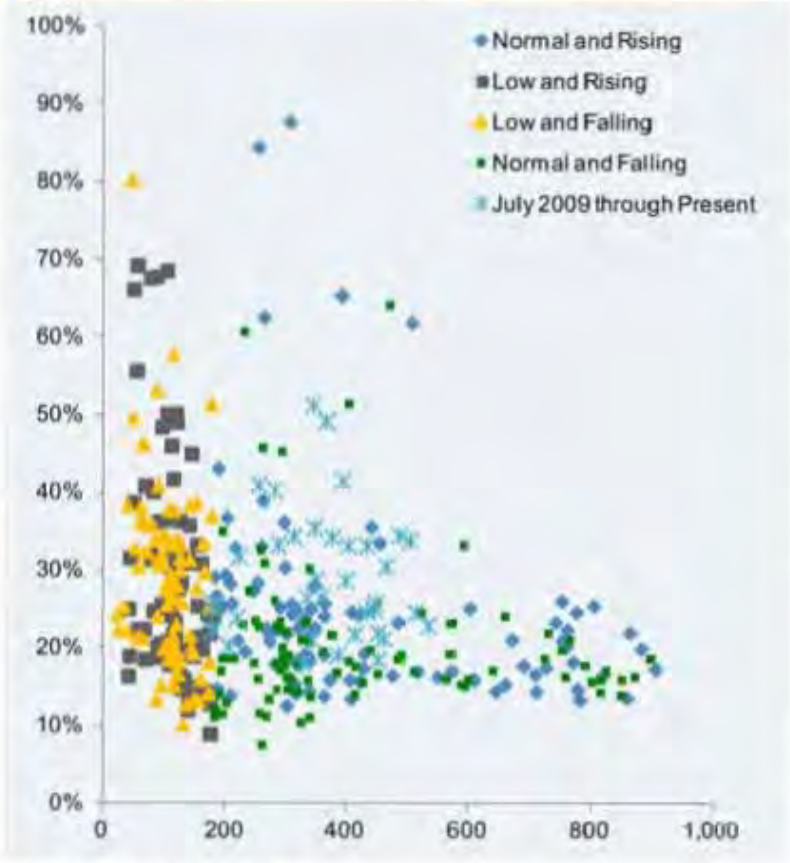


Source: LME, WBMS, J.P. Morgan

The data for this chart is the data shown in Annex **B**-22 at monthly frequency

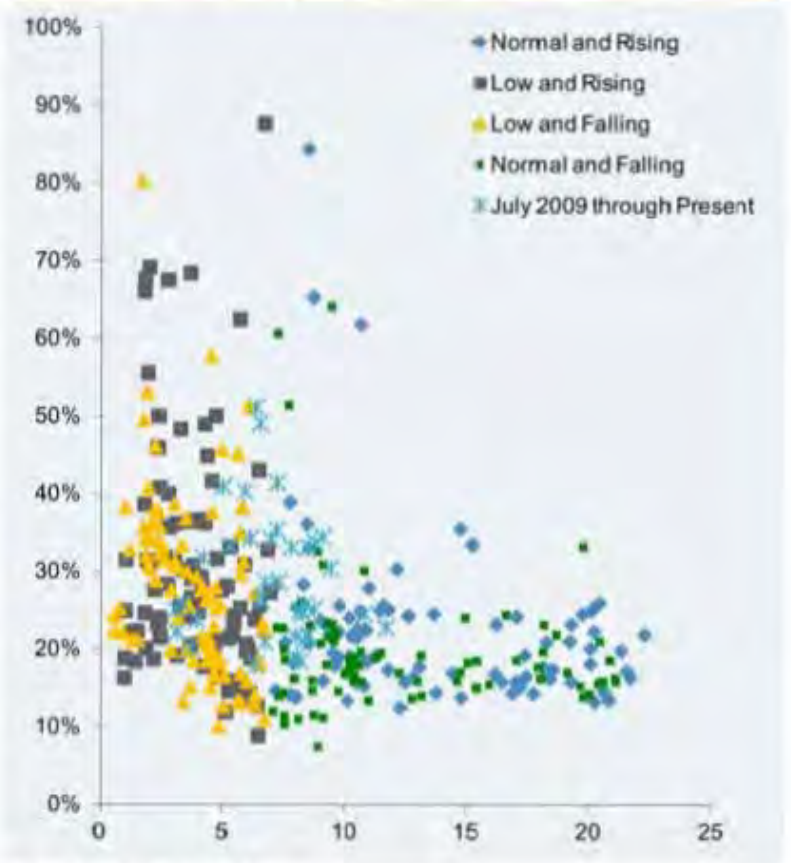
A-38: Monthly LME cash copper realized volatility plotted against on-warrant LME copper stocks by inventory regime (January 1980 – July 2012).

Annualized realized volatility of cash LME copper in percent (y-axis), monthly average on-warrant LME stocks in thousand metric tonnes (x-axis). Low = < 180 kmt.



Source: LME, WBMS, J.P. Morgan

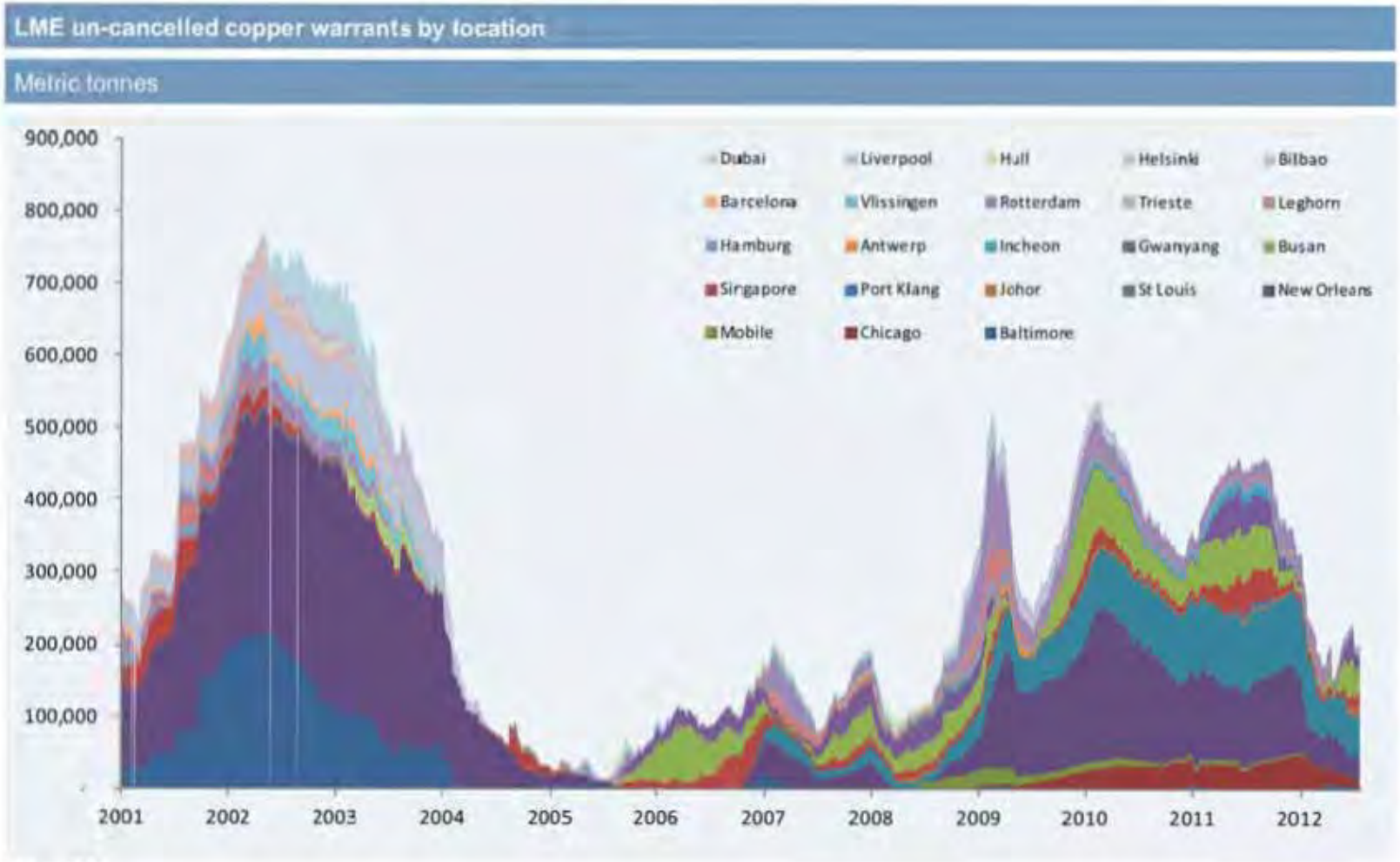
Annualized realized volatility of cash LME copper in percent (y-axis), monthly average global demand coverage in days afforded by on-warrant LME stocks (x-axis). Low = < 7 days.



Source: LME, WBMS, J.P. Morgan

The data for this chart is the data shown in Annex **B**-22 at monthly frequency

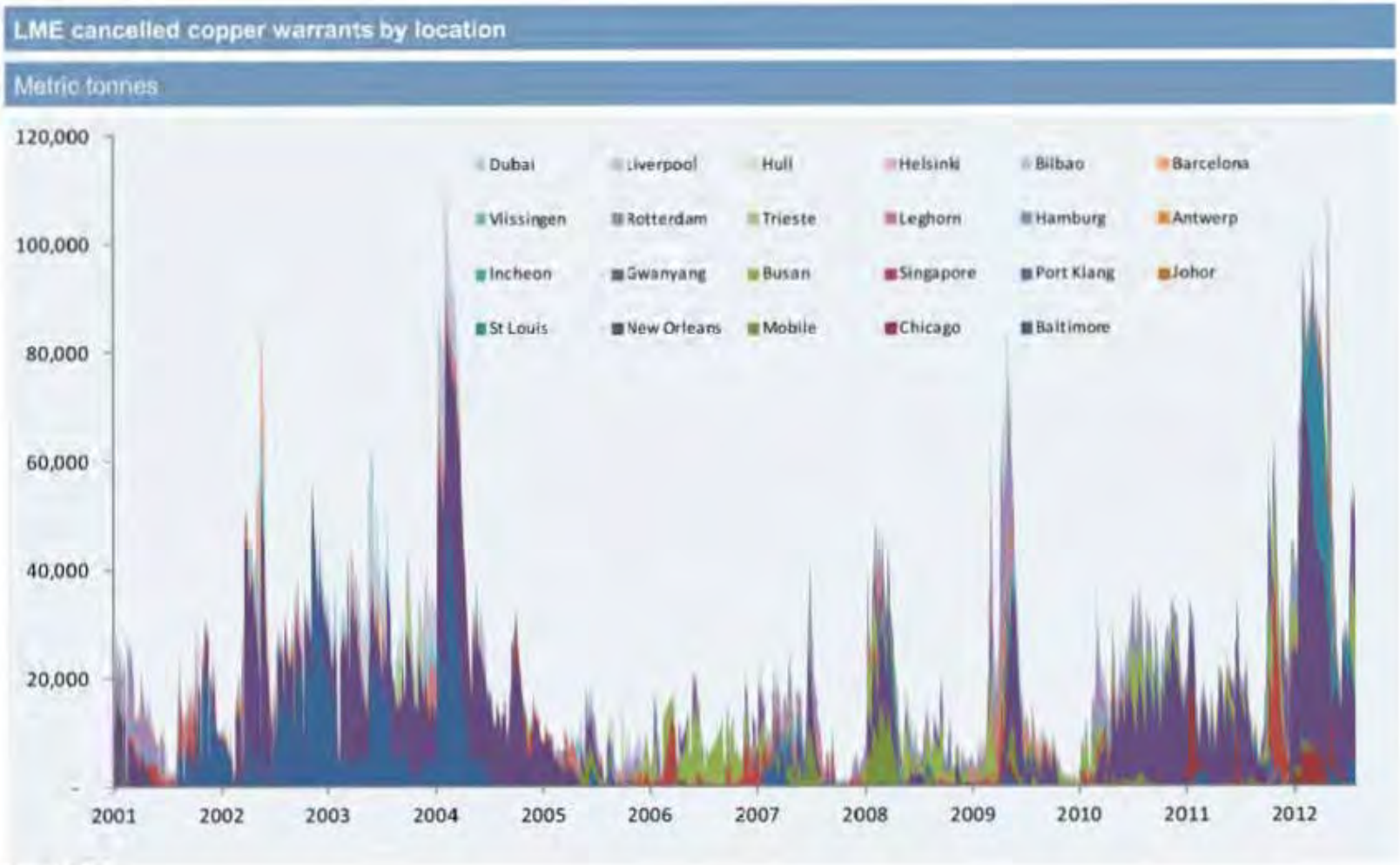
A-39: LME un-cancelled copper warrants by location.



Source: LME

The data for this chart can be found in Annex B-24

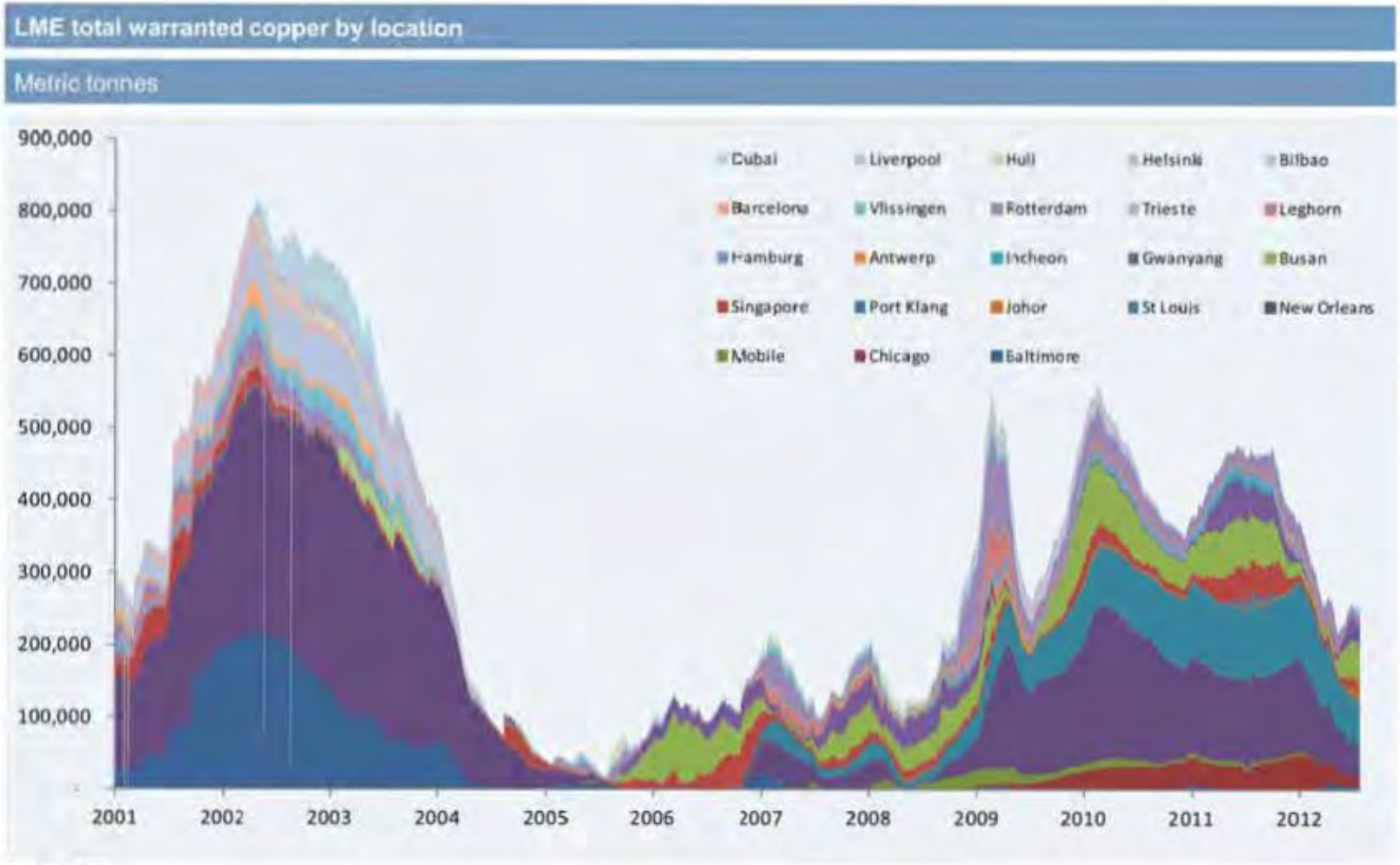
A-40: LME cancelled copper warrants by location.



Source: LME

The data for this chart can be 'ound in Annex B-25

A-41: LME total warranted copper by location.



Source: LME

The data for this chart can be found in Annex B-26

A-42: Changes in copper prices over various time intervals reflect the net effect of all factors and do not provide evidence of a causal effect on price (either up or down) from creation of the ETFS Copper ETP, if one even exists.

Changes are shown in US$ per metric tonnes and in percentage terms relative to the settlement cash price of LME and CMX copper the day before ETFS Physical Copper began trading (December 10, 2010)

	Closing Price on 9-Dec-10	1 Day Change		1 Week Change		1 Month Change		1 Quarter Change		1 Year Change	
		US$	%	US$	%	US$	%	US$	%	US$	%
Prompt CMX copper	$8,998.17	$51.81	0.6%	$157.63	1.8%	$403.45	4.5%	$227.08	2.5%	-$1,178.37	-13.1%
Prompt LME copper	$8,987.50	$45.50	0.5%	$116.50	1.3%	$345.50	3.8%	$266.50	3.0%	-$1,191.25	-13.3%

Source: LME, CMX

A-43: Gold production and use statistics.

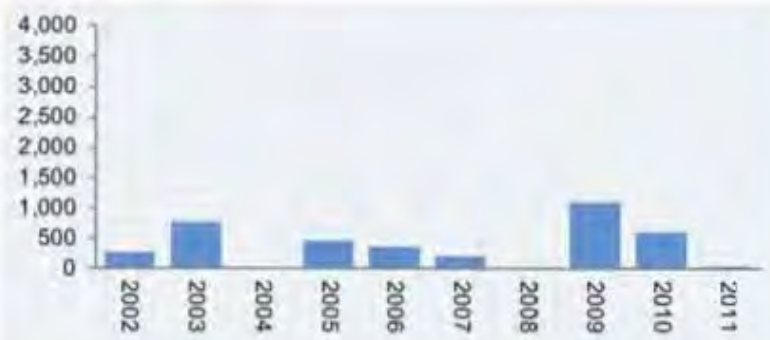
Global gold mine production

Metric tonnes

Source: GFMS

Global gold use (investment purposes)

Metric tonnes



Source: GFMS

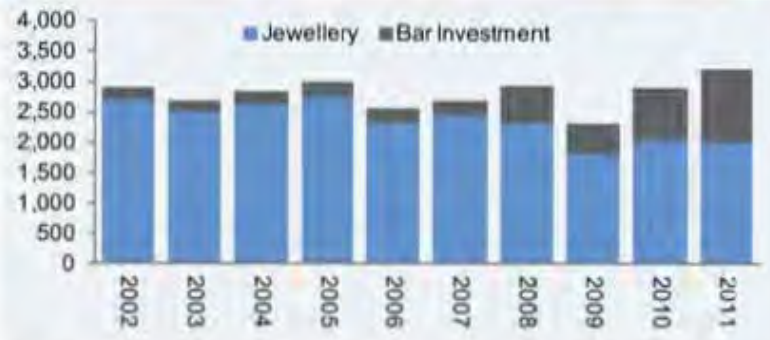
Global gold use (industrial purposes)

Metric tonnes

Source: GFMS

Global gold use (jewelry, bar investment)

Metric tonnes



Source: GFMS

The data for this chart can be found in Annex B-27

A-44: Silver production and use statistics.

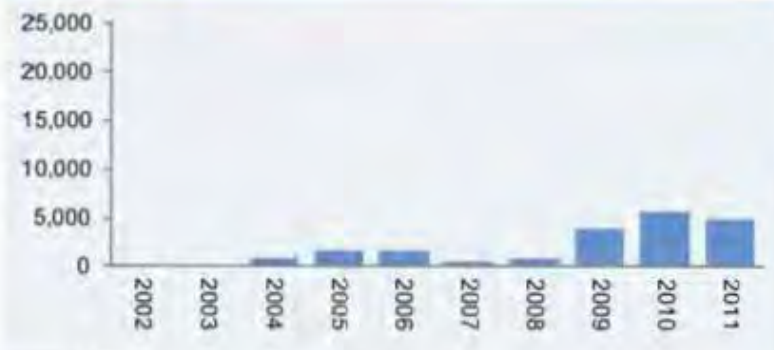
Global silver mine production

Metric tonnes

Source: GFMS

Global silver use (investment purposes)

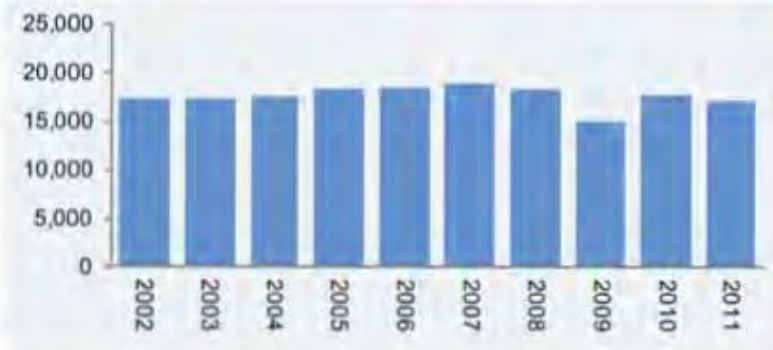
Metric tonnes



Source: GFMS

Global silver use (industrial purposes)

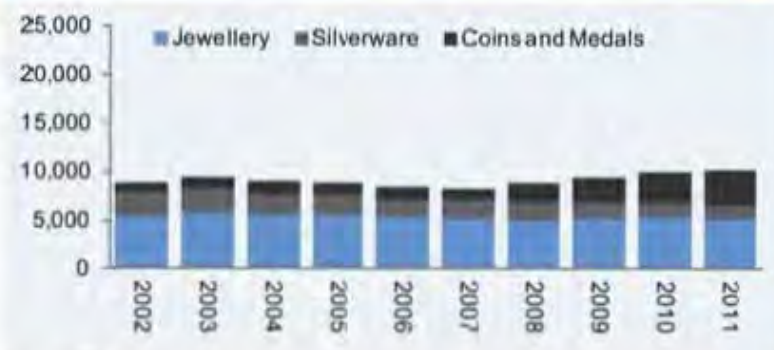
Metric tonnes



Source: GFMS

Global silver use (jewelry, silverware, coins and medals)

Metric tonnes



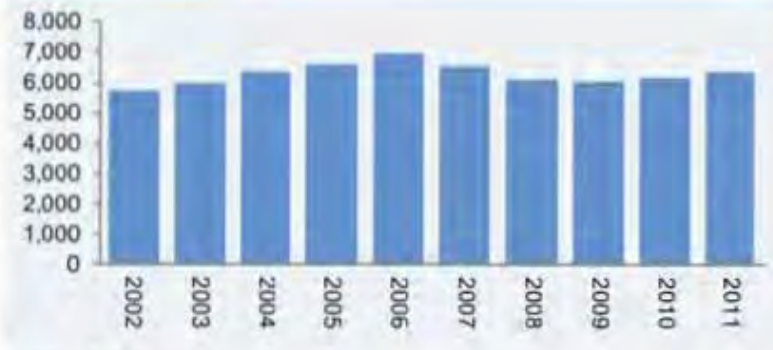
Source: GFMS

The data for this chart can be found in Annex B-28

A-45: Platinum production and use statistics.

Global platinum mine production

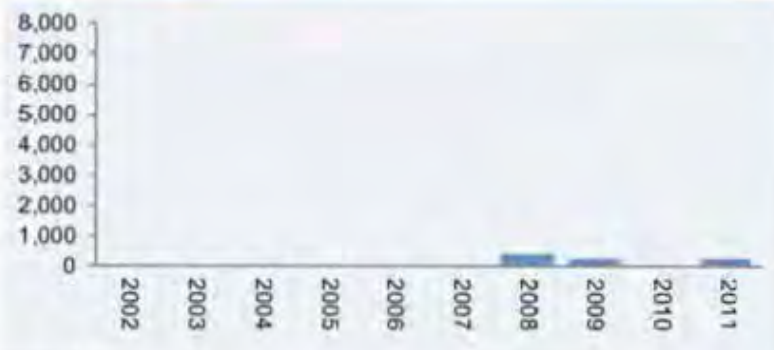
Thousand ounces



Source: GFMS

Global platinum use (investment purposes)

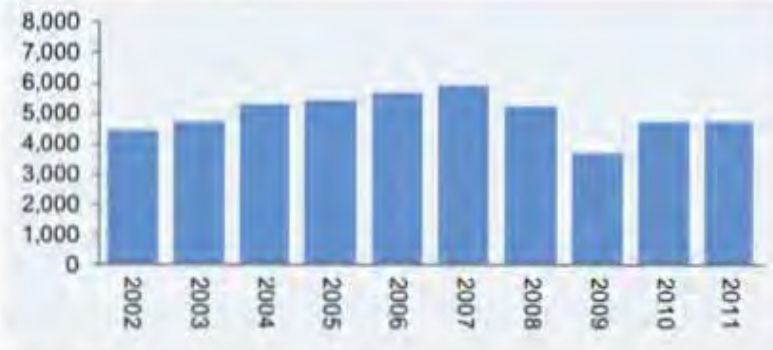
Thousand ounces



Source: GFMS

Global platinum use (industrial purposes)

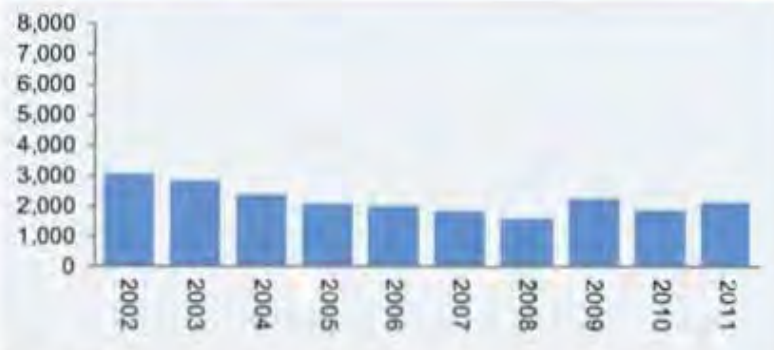
Thousand ounces



Source: GFMS

Global platinum use (jewelry)

Thousand ounces



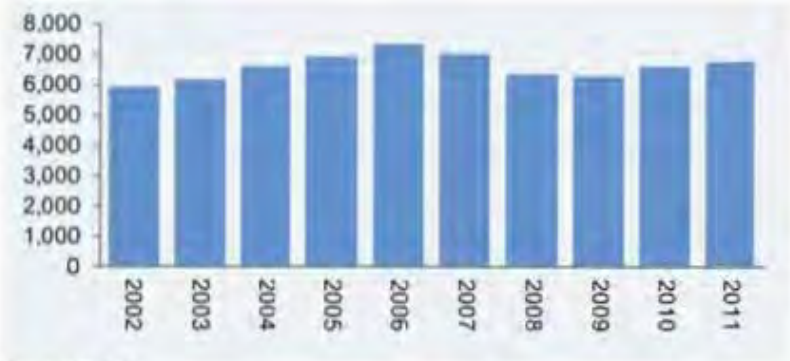
Source: GFMS

The data for this chart can be found in Annex B-29

A-46: Palladium production and use statistics.

Global palladium mine production

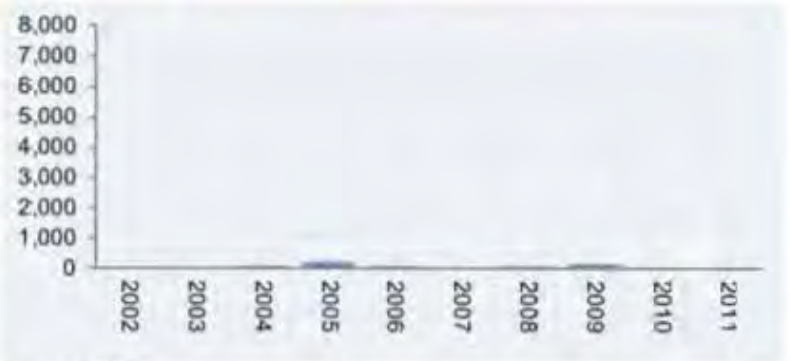
Thousand ounces



Source: GFMS

Global palladium use (investment purposes)

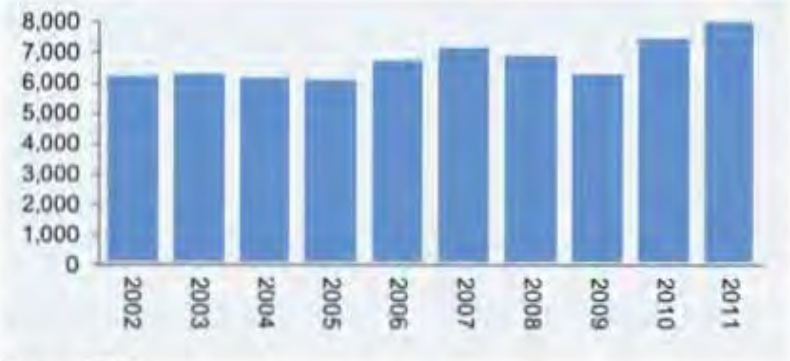
Thousand ounces



Source: GFMS

Global palladium use (industrial purposes)

Thousand ounces



Source: GFMS

Global palladium use (jewelry)

Thousand ounces

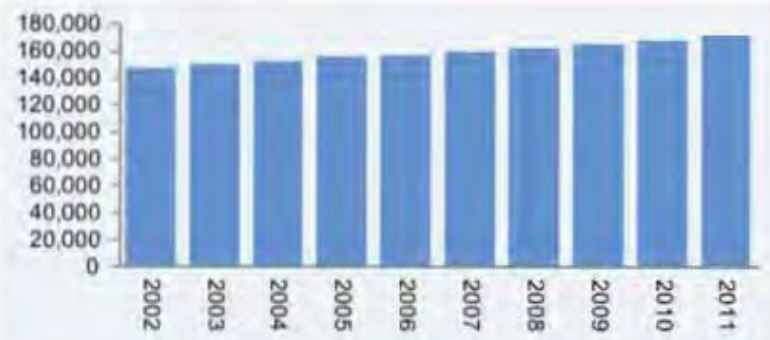
Source: GFMS

The data for this chart can be found in Annex B-30

A-47: Above-ground stock for gold, silver, platinum, and palladium.

Global above-ground stocks: gold

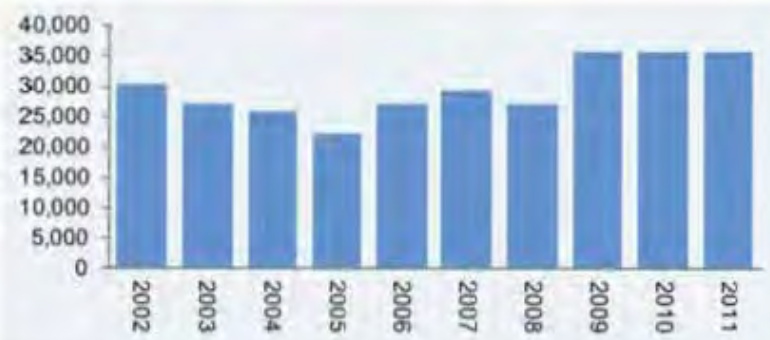
Metric tonnes



Source: GFMS

Global identifiable bullion stocks: silver

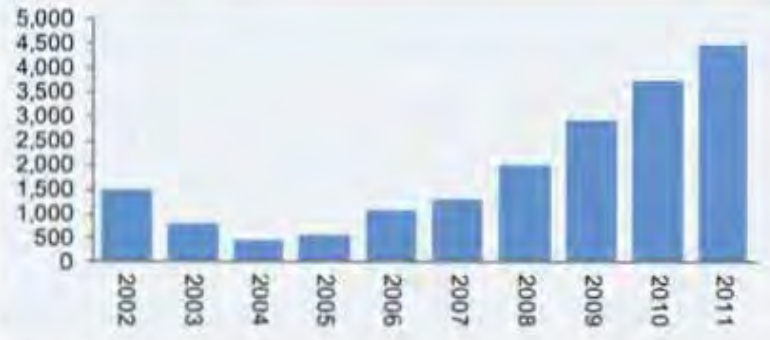
Metric tonnes



Source: GFMS, The Silver Institute

Global above-ground stocks: platinum

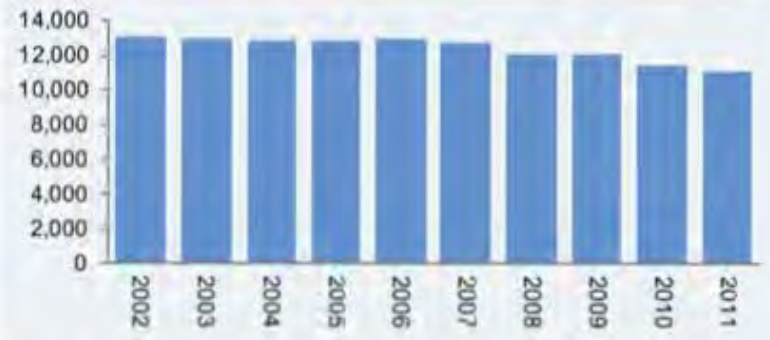
Thousand ounces



Source: GFMS

Global above-ground stocks: palladium

Thousand ounces



Source: GFMS

The data for this chart can be found in Annex B-27 through B-30

A-48: Production costs at high-cost gold mines, such as these Barrick assets in Tanzania, have increased by 30% or more over the past year.

Operating statistics for Barrick Gold's Tanzania mines

	Tanzania[1]							
	Bulyanhulu		Tulawaka (70%)		North Mara		Buzwagi	
Three months ended March 31,	2012	2011	2012	2011	2012	2011	2012	2011
Tons mined (thousands)	204	218	59	24	3,577	4,999	3,994	4,338
Tons processed (thousands)	200	205	55	63	538	611	756	685
Average grade (ounces per ton)	0.252	0.259	0.158	0.173	0.061	0.058	0.044	0.070
Recovery rate (percent)	91.2%	91.8%	95.4%	93.6%	79.1%	78.7%	82.4%	86.9%
Production (thousands of ounces)	46	49	8	10	26	28	27	42
Production costs per ounce								
Cash operating costs	$ 641	$ 549	$ 848	$ 688	$ 1,077	$ 699	$ 1,042	$ 617
Royalties and production taxes	$ 60	$ 35	$ 54	$ 50	63	61	62	50
Total cash costs[1]	701	584	902	738	1,140	760	1,103	667
Depreciation	117	114	349	202	295	170	293	255
Total production costs	$ 818	$ 698	$ 1,252	$ 940	$ 1,435	$ 930	$ 1,396	$ 922

Source: Barrick Gold

ANNEX A

A-49: Gold cash costs at one major producer's mine in New Zealand surged above $2050 per oz in 1Q2012, up from $775 last year (direct mining plus production).

Operating statistics for Waihi (New Zealand)

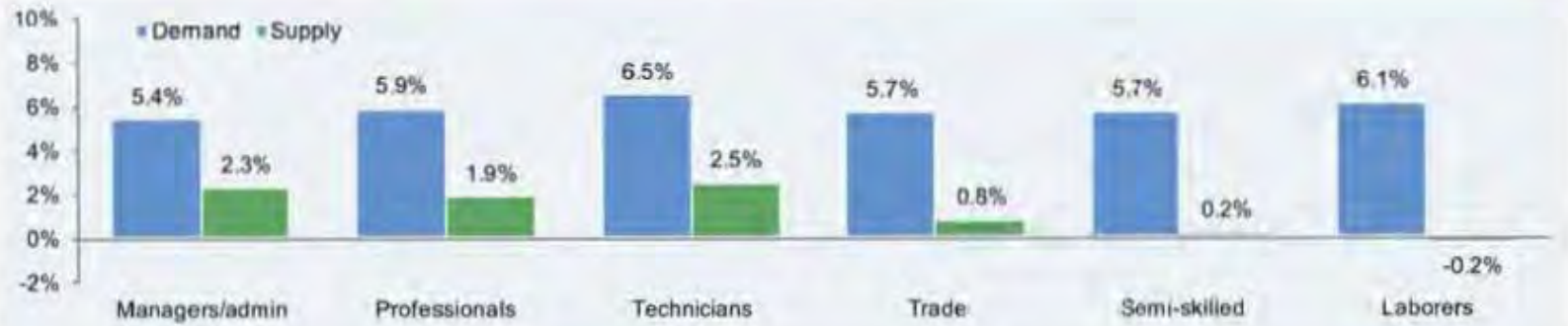
	Three Months Ended March 31,	
Tons mined (000 dry short tons):	**2012**	2011
Open pit		
Ore	**1**	-
Waste	**645**	320
Total	**646**	320
Underground	**33**	111
Tons milled (000 dry short tons)	**-**	251
Average ore grade (oz/ton)	**-**	0.118
Average mill recovery rate	**0.0%**	89.2%
Gold ounces produced (thousands):		
Consolidated	**5**	25
Attributable	**5**	25
Gold ounces sold (thousands):		
Consolidated	**7**	25
Attributable	**7**	25
Gold production costs (millions):		
Costs applicable to sales[1]	**$ 22**	$ 17
Amortization	**$ 4**	$ 5
Reclamation	**$ -**	$ -
Gold production costs (per ounce sold):		
Direct mining and production costs	**$ 2,066**	$ 775
By-product credits	**(102)**	(126)
Royalties and production taxes	**8**	20
Other	**1,250**	6
Costs applicable to sales(1)	**$ 3,211**	$ 675
Amortization	**$ 627**	$ 203
Reclamation	**$ 44**	$ 13

Source: Newmont Mining

A-50: Demand for skilled labor and for mining equipment such as tires outstrip supply.

Estimated supply and demand growth of labor in global mining industry

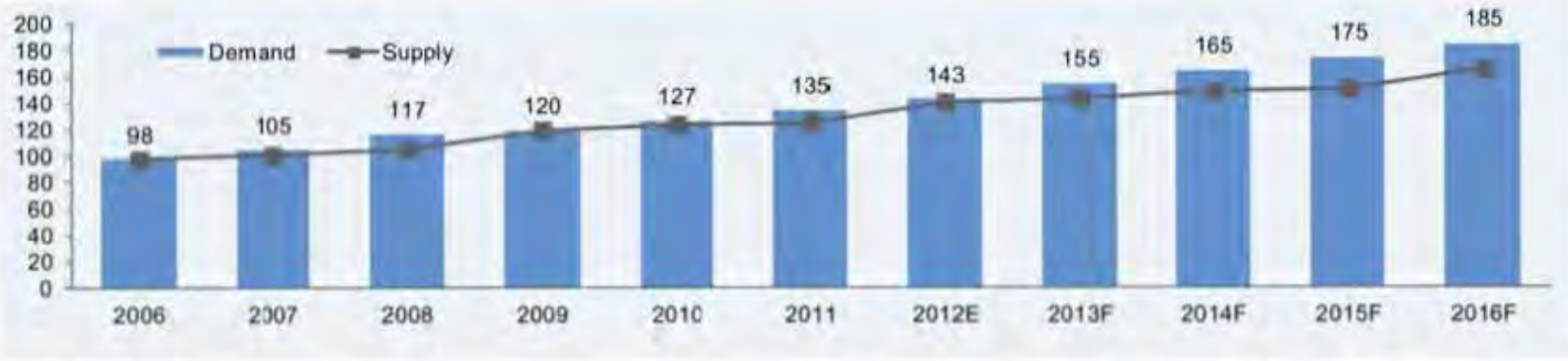
Percent CAGR 2005-2015



Source: Xstrata, Mineral Council of Australia, McKinsey

Estimated global supply and demand for tires

Thousands of 40" to 63" units



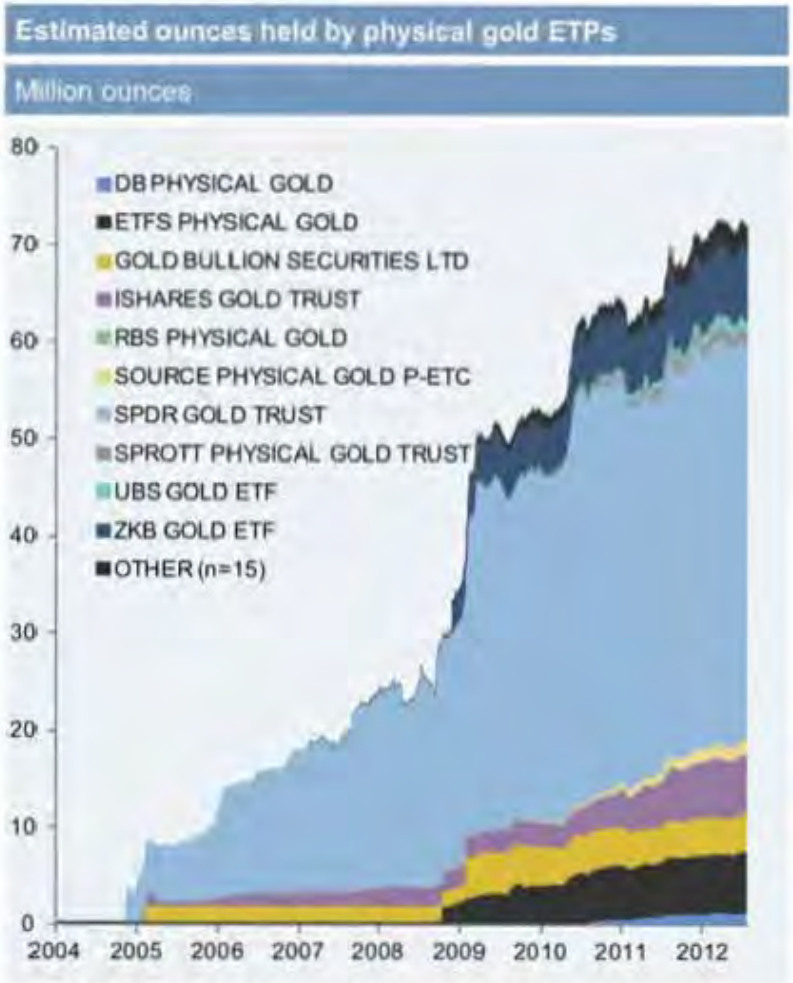
Source: Xstrata, McKinsey

The data for this chart can be found in Annex B-31

ANNEX II

A-51: Market capitalization and estimated ounces held in physical gold ETPs.

Source: ETP providers, CMX

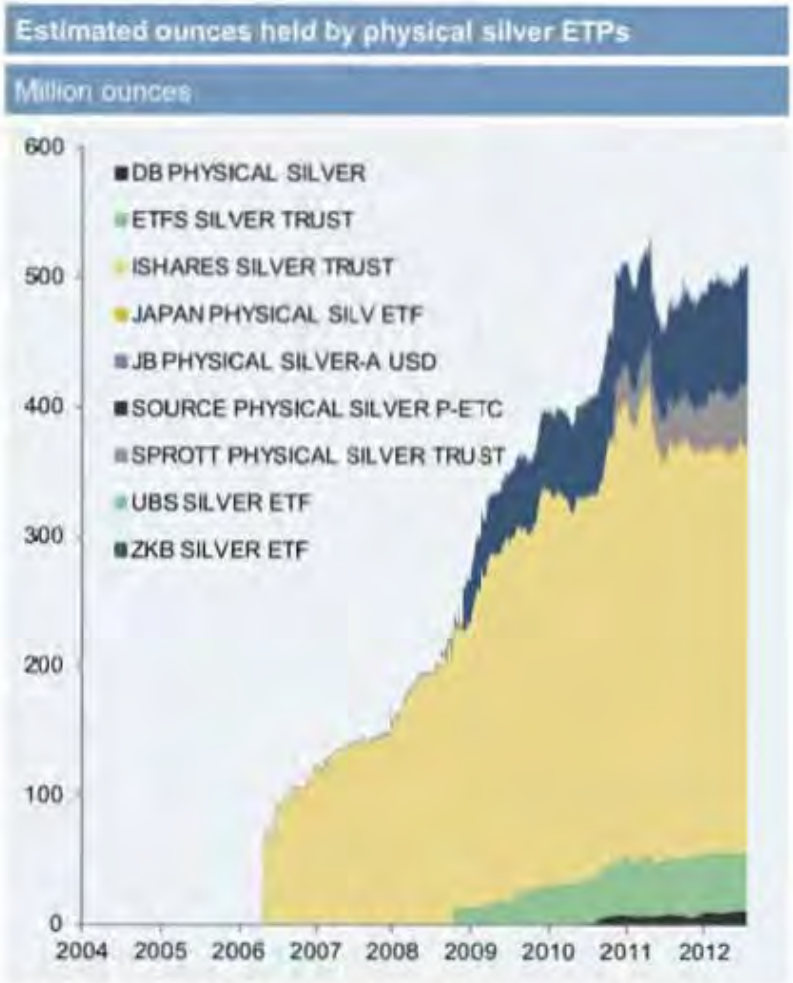


Source: ETP providers, CMX

The data for this chart can be found in Annex B-32 and B-33

A-52: Market capitalization and estimated ounces held in physical silver ETPs.

Source: ETP providers, CMX



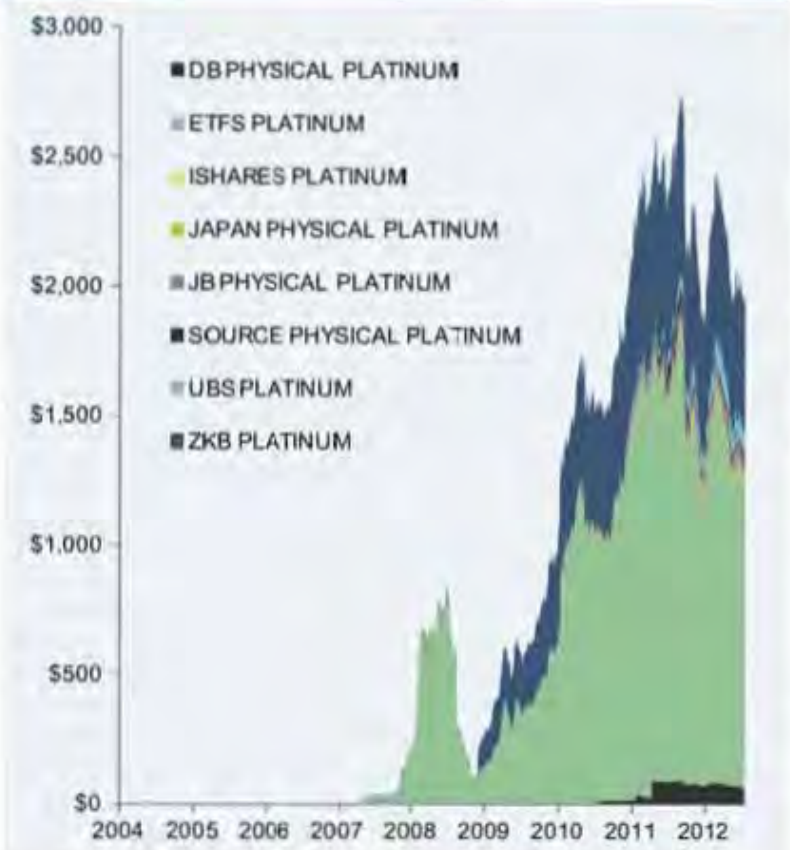
Source: ETP providers, CMX

The data for this chart can be found in Annex B-34 and B-35

A-53: Market capitalization and estimated ounces held in physical platinum ETPs.

Market capitalization of physical platinum ETPs

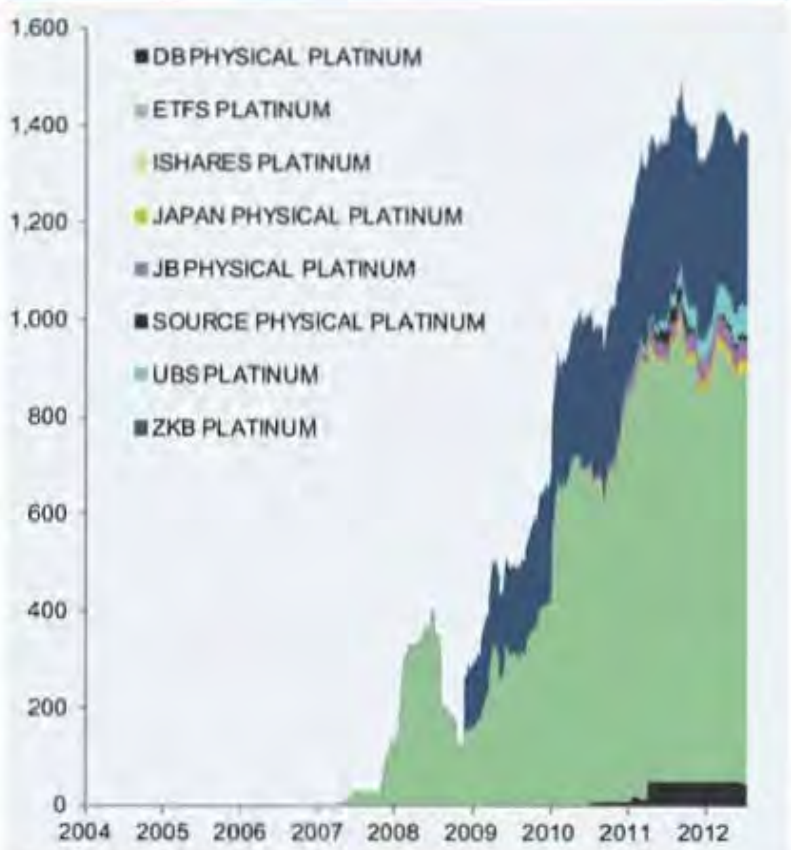
US$ millions



Source: ETP providers, NYMEX

Estimated ounces held by physical platinum ETPs

Thousand ounces



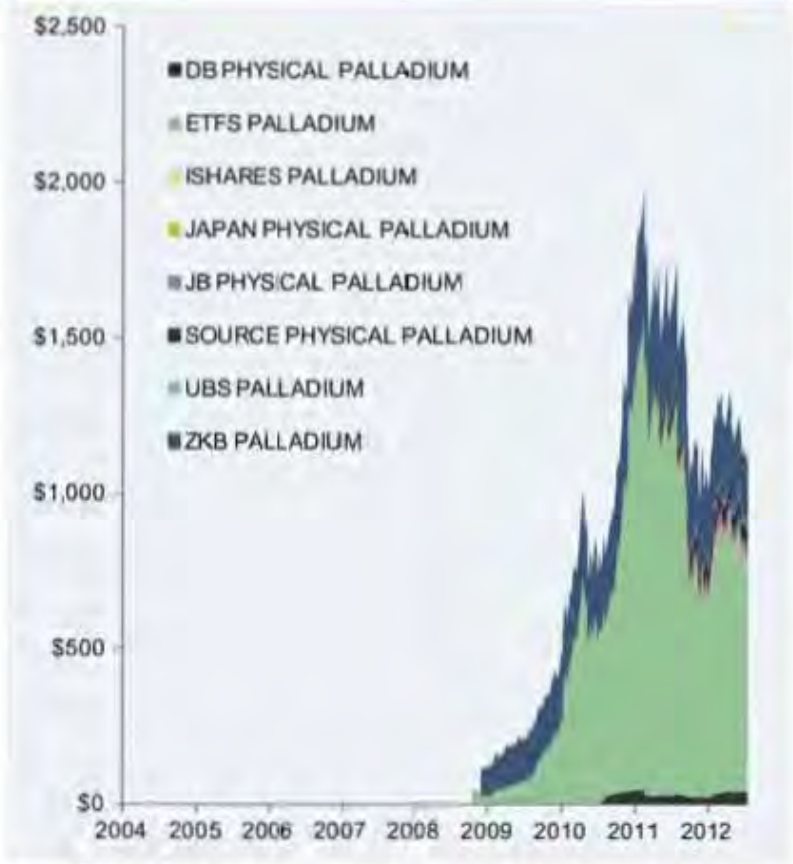
Source: ETP providers, NYMEX

The data for this chart can be found in Annex B-36 and B-37

A-54: Market capitalization and estimated ounces held in physical palladium ETPs.

Market capitalization of physical palladium ETPs

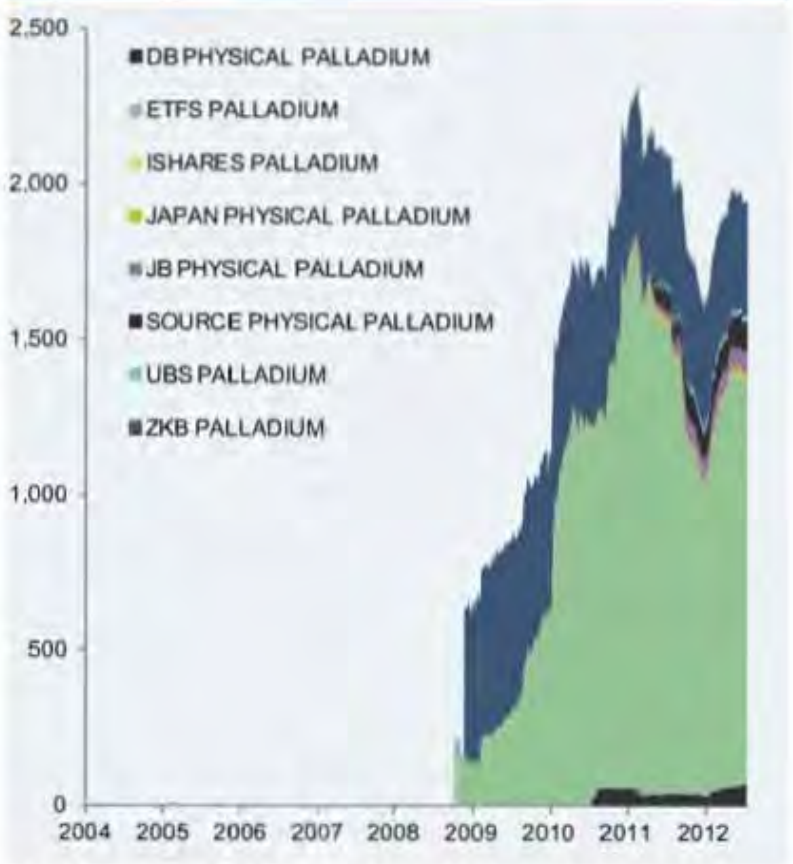
US$ millions



Source: ETP providers, NYMEX

Estimated ounces held by physical palladium ETPs

Thousand ounces



Source: ETP providers, NYMEX

The data for this chart can be found in Annex B-38 and B-39

ANNEX B

STRICTLY PRIVATE AND CONFIDENTIAL

Copper Production and Use Statistics

Units: Thousand metric tonnes
Source: Wood Mackenzie

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012E	2013F	2014F	2015F	2016F	2017F
Global mine production	**13,726**	**13,528**	**13,628**	**14,637**	**14,962**	**15,169**	**15,624**	**15,705**	**15,959**	**16,175**	**16,242**	**17,477**	**19,404**	**20,220**	**20,986**	**20,595**	**20,177**
Global refined production	**15,656**	**15,351**	**15,277**	**15,935**	**16,595**	**17,296**	**18,025**	**18,260**	**18,306**	**18,975**	**19,686**	**21,131**	**23,239**	**24,801**	**25,450**	**25,688**	**25,586**
Primary refined production	14,623	14,401	14,400	14,841	15,493	15,953	16,596	16,883	16,944	17,709	18,348	19,481	21,246	22,537	23,046	23,225	23,122
Primary as % of refined	*93%*	*94%*	*94%*	*93%*	*93%*	*92%*	*92%*	*92%*	*93%*	*93%*	*93%*	*92%*	*91%*	*91%*	*91%*	*90%*	*90%*
Secondary refined production	1,033	950	877	1,094	1,102	1,343	1,429	1,377	1,362	1,266	1,338	1,650	1,994	2,264	2,404	2,464	2,464
Secondary as % of refined	*7%*	*6%*	*6%*	*7%*	*7%*	*8%*	*8%*	*8%*	*7%*	*7%*	*7%*	*8%*	*9%*	*9%*	*9%*	*10%*	*10%*
Global copper refinery capacity	**18,031**	**18,136**	**18,543**	**18,920**	**19,897**	**20,648**	**21,819**	**22,709**	**23,626**	**24,061**	**25,073**	**25,982**	**27,144**	**28,176**	**28,374**	**28,475**	**28,094**
Refinery capacity utilization rate	***87%***	***85%***	***82%***	***84%***	***83%***	***84%***	***83%***	***80%***	***77%***	***79%***	***79%***	***81%***	***86%***	***88%***	***90%***	***90%***	***91%***
Global refined copper use	**14,783**	**14,894**	**15,575**	**17,021**	**16,957**	**17,484**	**17,981**	**17,929**	**17,323**	**19,324**	**19,797**	**20,337**	**21,302**	**22,494**	**23,506**	**24,345**	**25,031**
Global refined copper balance	**873**	**458**	**-298**	**-1,086**	**-362**	**-188**	**44**	**332**	**983**	**-348**	**-111**	**794**	**1,938**	**2,307**	**1,944**	**1,344**	**555**
Global direct use of scrap in copper use	**3,581**	**3,346**	**3,475**	**4,398**	**4,483**	**4,832**	**5,047**	**4,558**	**4,146**	**4,601**	**4,807**	**5,182**	**5,355**	**5,452**	**5,568**	**5,724**	**6,037**
Global total copper use (including scrap)	**18,364**	**18,239**	**19,050**	**21,419**	**21,441**	**22,315**	**23,028**	**22,486**	**21,469**	**23,925**	**24,603**	**25,518**	**26,657**	**27,945**	**29,074**	**30,068**	**31,068**
Direct scrap as % of total copper use	*20%*	*18%*	*18%*	*21%*	*21%*	*22%*	*22%*	*20%*	*19%*	*19%*	*20%*	*20%*	*20%*	*20%*	*19%*	*19%*	*19%*

Long-dated LME copper prices plotted against total liabilities of marginal cost producers (95th-percentile) in 2007 and 2011

Units: Liabilities in US$ millions, LME 60-month copper price in US$ per metric tonne

Source: Company Reports, LME, J.P. Morgan

	Total liabilities of marginal cost producers (US$ million)		LME 60-month price
Year	2011	2007	US$ per metric tonne
2002	2,405	1,058	$1,702
2003	2,415	1,621	$1,810
2004	5,023	2,413	$2,013
2005	6,437	3,500	$2,418
2006	6,367	5,230	$4,056
2007	9,982	5,978	$4,753
2008	13,064	9,101	$5,971
2009	17,124	7,884	$5,136
2010	20,714	7,783	$6,690
2011	34,251	6,994	$7,976

Monthly average LME cash copper prices plotted against the global distribution of production cash cost (C1)

Copper prices in real terms (US$2011)
Source: Wood Mackenzie, LME

		Inflator	C1 cash cost ranking by quartile					Monthly average LME price c/lb	Monthly high LME price c/lb	Monthly low LME price c/lb
Year	CPI	to 2011$	25	50	75	90	Average			
1975	31.3	4.4	131.1	186.6	222.6	251.2		246.8	267.5	229.5
1976	33.0	4.2	128.5	174.9	208.7	252.5		267.5	311.8	225.7
1977	35.2	3.9	125.6	176.8	207.8	243.7		232.4	268.4	205.6
1978	37.9	3.6	106.5	159.5	189.3	220.6		224.6	252.2	200.5
1979	42.1	3.3	106.3	150.5	193.7	209.7		294.7	328.2	246.1
1980	47.9	2.9	113.0	151.5	208.4	216.5	157.8	285.2	380.7	244.4
1981	52.8	2.6	124.2	170.8	203.4	211.3	168.0	207.4	221.2	195.1
1982	56.0	2.5	118.5	140.9	166.2	193.1	142.9	165.3	179.8	145.1
1983	57.8	2.4	103.4	128.4	154.9	174.9	127.7	172.0	191.1	150.2
1984	60.3	2.3	87.2	106.2	136.3	157.1	110.5	142.7	159.0	131.8
1985	62.5	2.2	69.6	95.4	123.4	134.6	99.6	143.0	152.9	136.0
1986	63.7	2.2	69.0	98.2	116.7	126.0	97.9	134.7	141.6	127.8
1987	66.0	2.1	83.5	100.6	118.9	132.5	101.8	168.6	271.1	127.5
1988	68.7	2.0	84.2	111.3	122.5	149.3	110.5	236.3	318.3	200.1
1989	72.0	1.9	88.2	107.1	139.1	154.7	112.3	247.1	294.8	209.6
1990	75.9	1.8	85.1	102.5	132.6	171.3	113.8	218.8	249.3	194.1
1991	79.1	1.7	84.8	108.3	127.1	158.8	111.6	184.6	195.2	175.0
1992	81.5	1.7	83.1	103.8	124.7	143.0	108.7	174.9	193.3	164.2
1993	83.9	1.6	83.6	100.5	113.3	131.6	102.6	142.5	167.9	121.3
1994	86.1	1.6	78.5	94.9	110.8	128.0	98.1	167.3	216.6	131.0
1995	88.5	1.6	65.8	93.8	109.9	133.8	91.7	207.0	217.1	195.8
1996	91.1	1.5	66.5	91.5	111.0	124.4	90.4	157.2	182.9	133.0
1997	93.2	1.5	66.8	87.0	107.9	117.6	88.4	152.5	175.1	118.1
1998	94.7	1.5	62.1	74.7	94.1	102.5	76.3	109.1	118.8	105.4
1999	96.7	1.4	54.7	66.8	80.6	92.4	67.6	101.7	113.9	89.0
2000	100.0	1.4	57.6	63.9	80.7	89.9	68.0	113.2	122.4	104.8
2001	102.8	1.3	52.6	60.8	76.8	92.6	62.4	95.9	108.6	83.7
2002	104.5	1.3	52.3	56.4	73.4	82.9	58.9	93.2	98.4	88.4
2003	106.8	1.3	52.1	56.6	73.6	88.2	58.8	104.0	128.7	92.8
2004	109.7	1.3	45.8	55.5	78.2	97.5	60.8	163.2	179.0	138.0
2005	113.4	1.2	39.9	66.9	91.6	121.0	57.8	202.9	252.1	174.6
2006	117.1	1.2	65.6	83.3	107.1	143.7	84.2	359.0	411.3	252.5
2007	120.5	1.1	63.5	84.7	128.1	158.0	84.1	369.5	415.3	294.0
2008	125.0	1.1	84.9	108.9	153.5	189.6	116.1	347.2	433.8	153.4
2009	129.7	1.1	87.6	103.6	130.2	167.0	100.3	248.7	336.2	155.1
2010	133.5	1.0	85.4	108.7	142.1	173.7	106.9	352.6	428.0	304.1
2011	137.7	1.0	95.8	128.1	164.6	206.2	128.4	399.6	447.6	333.3

Summary of project capital intensity

Units: Capital intensity is in US$ per metric tonne of copper equivalent production per year
Source: Wood Mackenzie

Project Type	Project Classification	Number of Projects	Capital intensity US$/tonnes per year of copper equivalent production	Cumulative projected copper production growth Thousand metric tonnes per year
Brownfield	Restart	9	$2,646	349
Brownfield	Extensions	21	$9,415	2608
Brownfield	Expansion to Existing Mine & Plant	22	$11,356	3662
Brownfield	Expansion to New Process Plant	29	$14,002	6832
Greenfield	Greenfield Base Case & Highly Probable	25	$15,659	9270
Greenfield	Greenfield Probable	15	$15,267	10798
Greenfield	Greenfield Possible	58	$18,523	16084

Capital intensity data for brownfield and greenfield projects

Units: Capital intensity in real terms (US$ 2011)
Source: Wood Mackenzie

	Number of Mines	Processing Capacity Total kmt per day	Processing Capacity Average kmt per day	Copper Production Total kmt per year	Copper Production Average kmt per year	Copper Equivalent Production Total kmt per year	Copper Equivalent Production Average kmt per year	Initial Capex ($2011 Million)	Capital Intensity Copper Equivalent Production Arithmetic US$ / kmt pa	Capital Intensity Copper Equivalent Production Weighted Average US$ / kmt pa
Mines Developed (1985-1999)										
Greenfield	55	1,818	33	3,733	68	4,564	83	$31,893	$8,024	$9,112
Brownfield	43	1,388	41	2,660	62	3,012	70	$13,114	$4,889	$4,354
Total	98	3,206	36	6,393	65	7,576	77	$45,007	$6,649	$7,221
Mines Developed (2000-2011)										
Greenfield	61	1,134	19	6,466	56	8,206	71	$54,359	$9,022	$9,874
Brownfield	55	1,698	33	5,453	56	6,347	65	$32,573	$5,299	$5,847
Total	116	2,832	52	11,918	56	14,553	68	$86,932	$7,256	$7,950
Brownfield Projects										
Restart (R)	9	161	18	349	39	384	43	$1,015	$3,103	$2,646
Extension (T)	21	1,009	48	2,259	108	3,207	153	$30,195	$9,572	$9,415
Expansion (X)	22	412	22	1,054	48	1,202	55	$13,646	$9,650	$11,356
Expansion (N)	29	1,679	58	3,170	109	3,718	128	$52,064	$14,886	$14,002
Total	81	3,260	42	6,832	84	8,511	105	$96,920	$10,777	$11,388
Greenfield Projects										
Base Case	21	1,019	49	2,147	102	2,728	130	$40,419	$14,278	$14,818
H Probable	4	197	49	291	73	391	98	$7,839	$17,070	$20,072
Probable	15	1,016	68	1,528	102	1,721	115	$26,279	$14,660	$15,267
Possible	58	3,384	58	5,286	91	7,013	121	$129,896	$18,084	$18,523
Tentative	8	283	35	527	66	727	91	$12,901	$16,388	$17,744
Total	106	5,899	56	9,780	92	12,579	119	$217,334	$16,679	$17,277

Global copper refined production and use with projections through 2025

Units: Thousand metric tonnes
Source: Wood Mackenzie

Year	Base case production capability	Highly probable projects	Probable Projects	Possible projects	Global use
1992	9,622				9,545
1993	9,534				9,463
1994	9,502				10,362
1995	10,183				10,347
1996	11,088				11,032
1997	11,499				11,246
1998	12,265				11,802
1999	12,841				12,477
2000	13,319				13,342
2001	13,726				13,136
2002	13,528				13,288
2003	13,628				14,090
2004	14,637				15,186
2005	14,962				15,106
2006	15,169				15,396
2007	15,624				15,507
2008	15,705				15,462
2009	15,959				14,848
2010	16,175				16,438
2011	16,242				16,710
2012	17,477				17,605
2013	19,404	68	64	85	18,763
2014	20,220	187	314	349	19,863
2015	20,986	298	641	1,427	20,791
2016	20,595	502	1,153	2,842	21,521
2017	20,177	729	2,595	3,759	22,107
2018	19,551	712	3,986	5,181	22,682
2019	19,191	677	4,544	6,264	23,292
2020	18,760	671	5,033	8,163	24,006
2021	17,705	780	5,380	9,592	24,757
2022	16,973	1,020	5,489	10,610	25,591
2023	16,047	962	5,450	11,934	26,460
2024	15,432	921	5,565	12,438	27,318
2025	14,971	871	5,574	12,577	28,144

Estimated price required for refined copper supply growth
Source: Wood Mackenzie

Probable and possible projects	Average production kmt per year	Cumulative average copper production kmt per year	Risk adjusted incentive price Cents/lb
San Martin Restart	6	6	134
Skouries Project	25	30	162
Mengya Project	1	32	171
Kinsenda Project	49	80	180
Golpu Project	286	367	184
Hackett River Project	6	373	187
Ambaji Project	8	381	187
Resolution Copper Project	598	979	196
Pebble Project	331	1,310	197
Frontier Restart	89	1,399	200
Florence SxEw Project	37	1,436	201
La Granja SxEw Project	489	1,924	216
Pumpkin Hollow	37	1,961	217
Rosemont Minesite Project	88	2,049	218
Khnaiguiyah Project	5	2,054	222
Kudz Ze Kayah Project	7	2,061	231
Minas de Rio Tinto Restart	33	2,094	234
Bahuerachi Project	71	2,165	236
Quellaveco Project	176	2,341	236
La Arena Project	29	2,370	238
Constancia Project	65	2,435	241
San Jorge Project	39	2,474	241
Haquira Minesite Project	181	2,655	244
La Zarza Project	4	2,658	249
Magistral Project	34	2,692	249
Galeno Project	146	2,839	251
Quebrada Blanca Mill	188	3,026	260
Izok Lake Project	22	3,049	262
Kipushi Restart	25	3,073	264
Tulsequah Project	8	3,081	265
KOV Restart and Expansion	130	3,211	265
Ambler Project	31	3,241	266
Caribou Restart	1	3,242	267
Sentinel	251	3,494	270
Pukaqaqa	48	3,541	273
Mina Justa Minesite Proj	90	3,631	274
Kolwezi Tailings SxEw Proj	67	3,699	275
Red Chris Project	33	3,732	278
Kapulo	14	3,746	281
Kutcho Project	14	3,760	281
Cerro Colorado (Pn) Proj	193	3,953	283
Shituru SxEw Project	34	3,987	288
Woodlawn Restart	4	3,990	290
Prosperity Project	42	4,032	294
El Arco Minesite Project	159	4,191	297
Lundberg	6	4,197	298
Michiquillay Project	250	4,447	299
Bur Project	5	4,453	301
Cobre Panama Project	246	4,698	302

Probable and possible projects	Average production kmt per year	Cumulative average copper production kmt per year	Risk adjusted incentive price Cents/lb
Cobre Panama Project	246	4,698	302
Morrison Project	29	4,727	305
Parys Mt. Project	4	4,731	305
Canariaco Norte	119	4,849	306
El Pachon Project	207	5,056	307
Panantza Project	180	5,237	308
Mirador Project	54	5,291	314
Tia Maria SxEw Project	103	5,394	315
Tucuma Project	30	5,424	328
White Range SxEw Project	14	5,438	329
Kingking Project	73	5,510	333
High Lake Project	23	5,533	335
Harper Creek Project	57	5,590	336
Alemao Project	69	5,659	336
Tampakan Project	342	6,000	340
Kalukundi Project	16	6,016	352
Andina SxEw Project	29	6,046	375
El Pilar SxEw Project	33	6,079	376
Casino	60	6,139	379
Chapi Sulphide	45	6,185	379
Roseby Project	26	6,211	381
McIlvenna Bay Project	9	6,220	383
Yenipazar	4	6,224	390
One One Eight SxEw Project	33	6,257	395
Los Chancas Project	74	6,331	395
Cristalino Project	91	6,422	398
Radomiro Tomic PhII Mill	146	6,568	411
Santo Domingo Sur Iris	63	6,631	415
Carmacks SxEw Project	15	6,646	424
Agua Rica Project	145	6,791	435
Afton-Ajax Restart	42	6,833	437
Namosi Project	61	6,894	447
Pilbara Project	15	6,909	453
Galore Creek Project	133	7,042	471
Aktogay Project	97	7,139	479
Schaft Creek Project	92	7,232	504
Caber Project	1	7,233	509
Rovina	20	7,253	514
Frieda River-Nena Project	186	7,439	524
Kulumaziba SxEw Project	8	7,447	598
Zafranal	77	7,524	680
Cerro Casale Project	136	7,660	726
Tac & Corak	3	7,663	737
Kakanda/Kambove SxEw Proj	24	7,687	758
Los Chancas SxEw Project	21	7,709	772
Conga Project	65	7,774	776
Brisas Project	28	7,802	836
Kerr Sulphurets Mitchell	76	7,877	865
Mungana Copper Project	7	7,884	1,340

China's production of refined copper relative to global refined production

Source: Wood Mackenzie

	China refined copper production thousand metric tonnes	Global refined copper production thousand metric tonnes	China share of global production Percent
1984	392	9,528	4.1%
1985	413	9,656	4.3%
1986	456	9,952	4.6%
1987	516	10,196	5.1%
1988	526	10,644	4.9%
1989	562	10,945	5.1%
1990	575	10,832	5.3%
1991	562	10,710	5.2%
1992	658	11,131	5.9%
1993	728	11,275	6.5%
1994	755	11,166	6.8%
1995	1,085	11,813	9.2%
1996	1,119	12,675	8.8%
1997	1,179	13,535	8.7%
1998	1,213	14,067	8.6%
1999	1,174	14,495	8.1%
2000	1,371	14,844	9.2%
2001	1,523	15,656	9.7%
2002	1,632	15,351	10.6%
2003	1,836	15,277	12.0%
2004	2,199	15,935	13.8%
2005	2,600	16,595	15.7%
2006	3,003	17,296	17.4%
2007	3,519	18,025	19.5%
2008	3,795	18,260	20.8%
2009	4,109	18,306	22.4%
2010	4,534	18,975	23.9%
2011	5,197	19,686	26.4%
2012E	5,318	20,205	26.3%
2013F	6,385	21,808	29.3%
2014F	6,998	23,003	30.4%
2015F	7,538	24,094	31.3%

China's use of refined copper relative to global refined use

Source: Wood Mackenzie

	China refined copper use thousand metric tonnes	Global refined copper use thousand metric tonnes	China share of global use Percent
1984	500	9,670	5.2%
1985	693	9,858	7.0%
1986	618	10,095	6.1%
1987	586	10,585	5.5%
1988	561	10,734	5.2%
1989	620	11,149	5.6%
1990	660	10,946	6.0%
1991	676	10,795	6.3%
1992	870	10,956	7.9%
1993	971	11,095	8.8%
1994	1,015	11,922	8.5%
1995	1,172	12,153	9.6%
1996	1,260	12,736	9.9%
1997	1,270	13,188	9.6%
1998	1,397	13,525	10.3%
1999	1,500	14,242	10.5%
2000	1,850	15,160	12.2%
2001	2,230	14,783	15.1%
2002	2,425	14,894	16.3%
2003	3,020	15,575	19.4%
2004	3,565	17,021	20.9%
2005	3,815	16,957	22.5%
2006	3,967	17,484	22.7%
2007	4,670	17,981	26.0%
2008	5,100	17,929	28.4%
2009	6,375	17,323	36.8%
2010	7,204	19,324	37.3%
2011	7,780	19,797	39.3%
2012E	8,325	20,337	40.9%
2013F	8,949	21,302	42.0%
2014F	9,620	22,494	42.8%
2015F	10,197	23,506	43.4%

China's net imports of refined copper and their share in meeting China's refined use

Source: Wood Mackenzie

	China refined copper imports thousand metric tonnes	Global refined copper exports thousand metric tonnes	China net copper imports thousand metric tonnes	China net copper imports as % of use Percent
1984	250	0	250	50.0%
1985	356	1	355	51.3%
1986	171	9	162	26.2%
1987	76	6	70	11.9%
1988	85	49	36	6.4%
1989	73	12	61	9.9%
1990	37	16	21	3.1%
1991	102	6	95	14.1%
1992	265	10	255	29.3%
1993	370	11	359	37.0%
1994	123	34	89	8.8%
1995	112	119	-7	-0.6%
1996	298	40	258	20.5%
1997	238	100	138	10.9%
1998	380	105	275	19.7%
1999	443	95	348	23.2%
2000	668	115	553	29.9%
2001	835	51	784	35.2%
2002	1,181	77	1,104	45.5%
2003	1,357	64	1,293	42.8%
2004	1,159	124	1,035	29.0%
2005	1,249	140	1,109	29.1%
2006	852	243	609	15.4%
2007	1,519	128	1,391	29.8%
2008	1,458	96	1,362	26.7%
2009	3,185	73	3,112	48.8%
2010	2,920	39	2,882	40.0%
2011	2,850	158	2,692	34.6%
2012E	2,957	200	2,757	33.1%
2013F	2,364	50	2,314	25.9%
2014F	2,732	50	2,682	27.9%
2015F	2,769	50	2,719	26.7%

Copper consumption per capita in selected countries

Units: GDP per capita in US$2011, refined copper use per capita in kilograms

Source: WBMS, USGS, LME, Wood Mackenzie,Government Statistics,J.P.Morgan

GDP per capita (US$2011)

	China	India	Japan	Taiwan	South Korea	United States
1980	192	269	9,037	2,367	1,674	12,164
1981	194	274	9,915	2,706	1,846	13,507
1982	200	278	9,151	2,680	1,938	13,913
1983	222	296	9,913	2,846	2,118	14,979
1984	247	282	10,480	3,169	2,307	16,515
1985	290	303	11,149	3,284	2,368	17,564
1986	277	318	16,431	3,939	2,701	18,403
1987	247	348	19,832	5,276	3,364	19,370
1988	279	362	23,979	6,309	4,460	20,672
1989	305	355	23,899	7,584	5,429	22,006
1990	312	376	24,452	8,077	6,153	23,024
1991	328	311	27,850	8,947	7,118	23,469
1992	361	280	30,290	10,513	7,541	24,484
1993	372	308	34,656	11,004	8,194	25,387
1994	467	354	38,048	11,913	9,485	26,650
1995	601	382	41,835	12,831	11,468	27,555
1996	699	409	36,875	13,442	12,249	28,794
1997	771	424	33,795	13,835	11,235	30,243
1998	817	422	30,523	12,601	7,463	31,500
1999	861	448	34,512	13,526	9,554	33,010
2000	946	449	36,801	14,426	11,347	35,065
2001	1,038	458	32,214	13,027	10,655	35,881
2002	1,132	478	30,756	13,093	12,094	36,769
2003	1,270	557	33,135	13,254	13,451	38,142
2004	1,486	660	36,059	14,205	15,029	40,262
2005	1,726	751	35,633	15,203	17,551	42,482
2006	2,064	845	34,150	15,538	19,707	44,613
2007	2,644	1,088	34,268	17,117	21,653	46,356
2008	3,405	1,050	38,216	17,371	19,162	46,918
2009	3,739	1,173	39,459	16,339	17,110	45,703
2010	4,418	1,451	42,783	18,633	20,756	47,095
2011	5,390	1,509	39,720	20,102	22,816	48,037

Refined copper use per capita (kilograms)

	China	India	Japan	Taiwan	South Korea	United States
1980	0.4	0.1	10.7	4.8	2.2	8.2
1981	0.4	0.1	10.2	5.1	3.7	8.8
1982	0.4	0.1	9.8	4.0	3.4	7.1
1983	0.4	0.1	9.6	5.6	3.8	7.7
1984	0.5	0.1	10.1	7.2	4.7	8.3
1985	0.7	0.1	10.3	4.8	5.1	7.9
1986	0.6	0.1	10.0	8.1	6.6	8.2
1987	0.5	0.1	11.1	10.5	6.9	8.8
1988	0.5	0.1	11.0	11.0	6.5	9.0
1989	0.5	0.2	11.8	15.6	6.5	8.9
1990	0.6	0.1	12.8	17.1	7.6	8.6
1991	0.6	0.1	13.0	19.4	7.9	8.1
1992	0.7	0.1	11.3	20.0	8.1	8.5
1993	0.8	0.1	11.1	22.7	9.1	9.1
1994	0.8	0.1	11.0	25.8	10.7	10.2
1995	1.0	0.2	11.3	26.4	12.0	9.5
1996	1.0	0.2	11.8	25.3	13.1	9.7
1997	1.0	0.2	11.4	27.0	13.5	10.2
1998	1.1	0.3	9.9	26.6	12.1	10.4
1999	1.2	0.3	10.2	29.6	16.8	10.6
2000	1.5	0.3	10.6	28.2	18.3	10.7
2001	1.7	0.3	9.0	24.1	17.9	9.1
2002	1.9	0.3	9.1	29.1	19.7	8.2
2003	2.3	0.3	9.4	27.4	18.9	7.7
2004	2.7	0.3	10.0	30.4	19.8	8.2
2005	2.9	0.3	9.8	28.0	17.7	7.7
2006	3.0	0.4	10.2	27.9	16.8	7.1
2007	3.5	0.5	9.9	26.3	17.8	7.1
2008	3.8	0.5	9.4	25.3	17.0	6.6
2009	4.8	0.5	6.9	21.5	18.2	5.4
2010	5.4	0.5	8.3	23.0	18.7	5.7
2011	5.8	0.5	7.9	19.8	16.4	5.8

Trends in refined copper use

Units: Thousand metric tonnes, 2012 to 2025 are forecasts

Source: Wood Mackenzie

	China	Brazil	India	Western Europe	USA	Japan
1959	90	21	54	1,622	1,327	219
1960	110	30	62	1,915	1,225	304
1961	120	36	68	1,983	1,327	373
1962	120	39	78	1,917	1,451	301
1963	120	38	79	1,982	1,590	352
1964	120	37	65	2,175	1,690	458
1965	120	31	62	2,157	1,846	428
1966	140	38	33	2,003	2,158	483
1967	150	41	42	1,973	1,798	616
1968	160	57	39	2,175	1,701	695
1969	150	63	51	2,342	1,944	807
1970	180	74	55	2,477	1,854	821
1971	210	95	61	2,370	1,831	806
1972	240	111	59	2,511	2,030	951
1973	270	125	63	2,650	2,221	1,202
1974	280	162	47	2,679	1,995	881
1975	300	155	24	2,406	1,399	827
1976	320	179	57	2,620	1,808	1,050
1977	330	214	37	2,755	1,986	1,127
1978	350	181	74	2,757	2,193	1,226
1979	360	223	68	2,826	2,165	1,301
1980	370	246	77	2,823	1,868	1,244
1981	380	179	75	2,674	2,030	1,199
1982	405	249	83	2,667	1,638	1,155
1983	440	148	96	2,613	1,797	1,144
1984	500	189	81	2,727	1,961	1,214
1985	693	196	83	2,696	1,888	1,250
1986	618	238	95	2,743	1,981	1,209
1987	586	245	100	2,764	2,140	1,357
1988	561	197	113	2,912	2,210	1,348
1989	620	187	130	3,064	2,203	1,447
1990	660	129	117	3,137	2,150	1,576
1991	676	171	101	3,173	2,058	1,613
1992	870	157	98	3,267	2,176	1,411
1993	971	149	111	3,100	2,360	1,384
1994	1,015	181	137	3,360	2,678	1,375
1995	1,172	198	155	3,359	2,534	1,415
1996	1,260	233	202	3,415	2,622	1,480
1997	1,270	258	186	3,625	2,790	1,441
1998	1,397	298	253	3,820	2,871	1,255
1999	1,500	285	262	3,905	2,966	1,293
2000	1,850	330	281	4,040	3,009	1,349
2001	2,230	336	293	3,925	2,594	1,145
2002	2,425	244	294	3,739	2,370	1,164
2003	3,020	303	302	3,716	2,240	1,202
2004	3,565	332	336	3,797	2,420	1,279
2005	3,815	335	379	3,574	2,270	1,256
2006	3,967	339	407	3,936	2,111	1,307
2007	4,670	331	516	3,667	2,137	1,268
2008	5,100	372	529	3,433	2,021	1,199
2009	6,375	316	552	2,844	1,648	876
2010	7,204	452	580	3,099	1,764	1,060
2011	7,780	395	593	2,980	1,819	1,006
2012	8,325	407	614	2,872	1,839	1,027
2013	8,949	427	644	2,919	1,879	1,054
2014	9,620	450	689	3,032	1,934	1,085
2015	10,197	475	755	3,107	1,967	1,103
2016	10,737	500	838	3,129	1,979	1,104
2017	11,220	524	924	3,109	1,956	1,091
2018	11,725	550	1,013	3,086	1,930	1,080
2019	12,253	576	1,110	3,061	1,899	1,068
2020	12,853	605	1,216	3,037	1,863	1,057
2021	13,483	634	1,332	3,011	1,825	1,045
2022	14,184	664	1,458	2,977	1,786	1,032
2023	14,922	696	1,595	2,942	1,745	1,019
2024	15,653	728	1,745	2,905	1,702	1,006
2025	16,357	762	1,908	2,869	1,656	992

Estimated net release of copper supply from substitution generally increases when copper prices rise

Units: Net release of copper supply in thousand metric tonnes, net supply release relative to consumption in percent, average LME copper cash price in US$ per metric tonne
Source: International Copper Association, Wood Mackenzie, LME

	Net release of copper supply from substitution thousand metric tonnes	Average LME cash copper price US$ per mt	Net release of copper supply relative to global total use Percent
2005	302	$3,830	1.4%
2006	440	$6,940	2.0%
2007	530	$7,230	2.3%
2008	468	$7,040	2.1%
2009	394	$5,320	1.8%
2010E	478	$7,680	2.0%
2011E	517	$8,818	2.1%

Total copper inventories on exchanges (LME, SHFE, CMX)

Units: Metric tonnes

Source: LME, SHFE, CMX

	LME	SHFE	CMX
	metric tonnes	metric tonnes	metric tonnes
1/31/2003	836,025	67,156	396,483
2/28/2003	820,950	82,859	374,707
3/31/2003	814,700	74,292	363,725
4/30/2003	769,825	53,133	351,005
5/30/2003	744,600	54,684	336,728
6/30/2003	665,675	81,102	321,084
7/31/2003	614,900	88,100	311,220
8/29/2003	621,050	93,441	304,034
9/30/2003	580,025	84,764	299,000
10/31/2003	519,300	116,240	294,422
11/28/2003	466,900	110,011	289,257
12/31/2003	432,975	120,631	280,938
1/30/2004	363,600	114,131	263,140
2/27/2004	285,100	130,333	241,606
3/31/2004	189,125	120,808	213,288
4/30/2004	152,625	98,667	171,691
5/31/2004	133,775	58,544	131,818
6/30/2004	104,575	69,981	95,082
7/30/2004	88,450	43,865	79,015
8/31/2004	104,950	30,012	62,993
9/30/2004	93,550	20,493	49,478
10/29/2004	78,850	29,720	45,495
11/30/2004	59,975	23,258	42,400
12/31/2004	48,875	31,685	48,203
1/31/2005	45,675	19,463	45,817
2/28/2005	53,975	44,225	46,815
3/31/2005	44,775	16,327	43,348
4/29/2005	59,975	17,265	30,116
5/31/2005	45,225	28,411	22,260
6/30/2005	29,525	28,669	15,297
7/29/2005	30,900	34,387	10,992
8/31/2005	65,675	42,899	9,286
9/30/2005	83,250	29,452	7,119
10/31/2005	62,575	47,350	3,690
11/30/2005	71,175	74,160	3,681
12/30/2005	89,575	57,844	6,814
1/31/2006	97,600	51,343	11,653
2/28/2006	108,900	56,154	31,026
3/31/2006	121,925	32,097	35,285
4/28/2006	117,725	31,117	17,132
5/31/2006	112,175	45,320	9,544
6/30/2006	93,575	60,709	7,903
7/31/2006	97,450	49,553	6,756
8/31/2006	125,350	48,193	12,377
9/29/2006	117,575	33,549	20,360
10/31/2006	130,500	34,796	23,244
11/30/2006	155,350	22,731	30,948
12/29/2006	182,800	31,300	34,078
1/31/2007	211,825	24,071	35,969
2/28/2007	207,975	31,007	36,994
3/30/2007	178,075	59,364	36,349
4/30/2007	157,200	67,820	33,149
5/31/2007	128,925	95,254	27,500
6/29/2007	114,700	90,617	22,123
7/31/2007	101,750	90,089	21,879
8/31/2007	139,425	66,793	20,705
9/28/2007	130,775	47,791	20,115
10/31/2007	166,975	56,931	19,570
11/30/2007	189,200	34,438	17,981
12/31/2007	197,450	25,597	15,230
1/31/2008	178,775	20,245	13,978
2/29/2008	143,650	48,885	13,080
3/31/2008	112,500	55,607	11,931
4/30/2008	110,525	49,417	10,827
5/30/2008	124,950	44,554	11,027
6/30/2008	122,600	32,401	11,040
7/31/2008	142,400	36,839	6,323
8/29/2008	173,375	17,625	5,390
9/30/2008	198,600	16,130	9,921
10/31/2008	230,650	24,788	9,891
11/28/2008	291,650	16,335	16,780
12/31/2008	339,775	15,326	34,514
1/30/2009	491,525	16,567	40,240
2/27/2009	542,300	28,332	45,305
3/31/2009	499,625	25,181	46,186
4/30/2009	405,775	19,064	48,056
5/29/2009	312,275	30,217	55,664
6/30/2009	265,950	56,088	59,795
7/31/2009	280,875	51,135	54,957
8/31/2009	298,925	86,625	53,209
9/30/2009	345,650	98,689	53,483
10/30/2009	372,200	102,835	61,949
11/30/2009	438,525	101,277	85,691
12/31/2009	502,325	95,315	99,182
1/29/2010	541,050	101,210	103,620
2/26/2010	549,725	149,478	103,260
3/31/2010	514,325	155,465	101,103
4/30/2010	499,300	189,441	101,151
5/31/2010	476,725	157,698	101,632
6/30/2010	451,100	123,939	101,925
7/30/2010	413,500	104,507	100,727
8/31/2010	398,525	110,582	95,346
9/30/2010	374,150	87,447	84,883
10/29/2010	368,500	106,091	75,100
11/30/2010	355,750	122,612	71,716
12/31/2010	377,550	131,891	64,613
1/31/2011	394,025	129,250	70,670
2/28/2011	421,000	158,101	82,935
3/31/2011	439,850	161,916	84,725
4/29/2011	463,650	128,268	83,190
5/31/2011	467,775	82,309	81,011
6/30/2011	465,250	90,089	80,105
7/29/2011	466,550	117,067	82,753
8/31/2011	463,825	102,258	85,481
9/30/2011	473,700	97,911	87,515
10/31/2011	429,375	73,768	89,917
11/30/2011	386,625	65,205	87,040
12/30/2011	370,900	93,219	87,983
1/31/2012	330,825	131,645	89,060
2/29/2012	296,425	216,086	91,628
3/30/2012	256,275	218,814	86,523
4/30/2012	248,350	204,762	76,004
5/31/2012	230,675	147,044	59,752
6/29/2012	257,150	139,442	53,335
7/31/2012	248,825	156,510	48,129

Assets held by ETFS physical copper

Source: ETFS, LME, J.P. Morgan

	Million shares	Last Price (US$)	Market Cap (US$ million)	Prompt LME copper price (US$/mt)	Estimated inventory in metric tonnes
12/10/2010	0.005	45.150	0.226	9033	25
12/31/2010	0.289	48.810	14.106	9644	1463
1/31/2011	0.414	48.710	20.166	9771	2064
2/28/2011	0.320	49.300	15.776	9883	1596
3/31/2011	0.472	46.520	21.957	9420	2331
4/30/2011	0.653	46.500	30.365	9303	3264
5/31/2011	0.682	45.870	31.283	9206	3398
6/30/2011	0.465	46.290	21.525	9422	2285
7/31/2011	0.465	47.940	22.292	9816	2271
8/31/2011	0.358	45.570	16.314	9264	1761
9/30/2011	0.358	34.120	12.215	7005	1744
10/31/2011	0.358	38.820	13.898	7986	1740
11/30/2011	0.374	38.440	14.377	7870	1827
12/31/2011	0.389	36.750	14.296	7595	1882
1/31/2012	0.404	40.450	16.342	8307	1967
2/29/2012	1.187	41.030	48.703	8497	5732
3/31/2012	1.415	41.020	58.043	8469	6854
4/30/2012	1.358	41.430	56.262	8460	6651
5/31/2012	0.430	35.800	15.394	7440	2069
6/30/2012	0.353	37.050	13.079	7697	1699
7/31/2012	0.353	36.340	12.828	7556	1698

Assets held by DB physical copper

Source: DB, LME, J.P. Morgan

	Million shares	Last Price (US$)	Market Cap (US$ million)	Prompt LME copper price (US$/mt)	Estimated inventory in metric tonnes
7/11/2011	0.002	95.590	0.191	9552	20
7/31/2011	0.002	97.450	0.195	9816	20
8/31/2011	0.002	92.570	0.185	9264	20
9/30/2011	0.002	69.500	0.139	7005	20
10/31/2011	0.002	78.880	0.158	7986	20
11/30/2011	0.002	78.230	0.156	7870	20
12/31/2011	0.002	74.640	0.149	7595	20
1/31/2012	0.002	82.310	0.165	8307	20
2/29/2012	0.037	83.410	3.086	8497	363
3/31/2012	0.052	83.410	4.337	8469	512
4/30/2012	0.052	84.170	4.377	8460	517
5/31/2012	0.067	72.640	4.867	7440	654
6/30/2012	0.067	75.450	5.055	7697	657
7/31/2012	0.067	74.190	4.971	7556	658

Estimated investment in copper price risk from financial instruments (S&P GSCI and DJ-UBS commodity indices)

Source: S&P, DJ-UBS, LME, J.P. Morgan

	S&P GSCI estimated exposure $Bn	Copper Index Weight %	Estimated copper exposure $Bn	Average prompt LME copper price $/mt	Metric tonnes to match exposure metric tonnes
2004	20	2.2%	$0.45	$2,854	156,799
2005	30	2.4%	$0.71	$3,650	195,377
2006	40	2.8%	$1.13	$6,737	167,635
2007	80	3.8%	$3.01	$7,133	421,935
2008	45	3.1%	$1.41	$6,942	203,557
2009	55	2.5%	$1.36	$5,183	262,124
2010	100	3.7%	$3.72	$7,548	492,762
2011	120	4.0%	$4.75	$8,818	539,158

	DJ-UBS estimated exposure $Bn	Copper Index Weight %	Estimated copper exposure $Bn	Average prompt LME copper price c/lb	Metric tonnes to match exposure metric tonnes
2004	10	5.8%	$0.58	129	204,741
2005	24	5.9%	$1.41	165	388,784
2006	35	5.9%	$2.06	308	303,044
2007	40	6.2%	$2.48	323	347,538
2008	20	7.0%	$1.41	313	204,222
2009	30	7.3%	$2.19	237	419,784
2010	62	7.6%	$4.74	343	626,045
2011	75	7.5%	$5.65	400	641,045

Global refined copper balance plotted against annual change in average cash LME copper prices

Units: Balance in thousand metric tonnes, annual change in average cash LME copper prices in percent
Source: Wood Mackenzie, LME

	Global refined copper balance thousand metric tonnes	Annual change in average LME cash copper prices Percent
1984	-142	-13.4%
1985	-201	3.8%
1986	-142	-4.0%
1987	-389	28.5%
1988	-91	47.0%
1989	-204	9.6%
1990	-114	-6.4%
1991	-84	-12.3%
1992	175	-2.3%
1993	181	-16.3%
1994	-756	20.7%
1995	-340	27.3%
1996	-61	-22.0%
1997	347	-0.6%
1998	542	-27.4%
1999	253	-4.8%
2000	-317	15.3%
2001	873	-13.0%
2002	458	-1.3%
2003	-298	14.3%
2004	-1,086	61.1%
2005	-362	28.4%
2006	-188	82.7%
2007	44	5.9%
2008	332	-2.4%
2009	983	-25.7%
2010	-348	46.0%
2011	-111	16.9%

Global unwrought copper inventories held on and off exchanges

Units: Thousand metric tonnes

Source: Wood Mackenzie, LME, CMX, SHFE

	Total unwrought copper inventories thousand metric tonnes	Copper inventories held on exchanges (LME + SHFE + CMX) thousand metric tonnes	Copper inventories held off exchanges thousand metric tonnes
1984	3,700	59	3,641
1985	3,499	59	3,440
1986	3,357	59	3,298
1987	2,968	59	2,909
1988	2,877	77	2,800
1989	2,673	123	2,550
1990	2,559	196	2,363
1991	2,475	358	2,117
1992	2,650	439	2,211
1993	2,830	667	2,164
1994	2,074	326	1,748
1995	1,735	318	1,417
1996	1,674	177	1,497
1997	2,020	458	1,563
1998	2,562	766	1,796
1999	2,815	937	1,879
2000	2,498	524	1,975
2001	3,371	1,138	2,234
2002	3,829	1,293	2,536
2003	3,531	806	2,725
2004	2,445	124	2,320
2005	2,082	156	1,926
2006	1,894	253	1,641
2007	1,938	237	1,701
2008	2,270	390	1,880
2009	3,252	688	2,564
2010	2,904	568	2,336
2011	2,793	545	2,249

Copper scrap use is sensitive to price. As prices rise, more scrap is recovered, helping to moderate price appreciation

Units: Annual change in global direct scrap use and annual changes in average LME copper prices

Source: Wood Mackenzie, LME

	Global refined copper use	Global direct use of copper scrap	Total global copper use (refined plus scrap)	Change in direct scrap use	Average cash LME price	Percentage change in annual average LME cash copper prices
	kmt	kmt	kmt	kmt	US$ per mt	Percent
2002	14,894	3,346	18,239	-236	1,557	-1.3%
2003	15,575	3,475	19,050	129	1,779	14.3%
2004	17,021	4,398	21,419	923	2,868	61.1%
2005	16,957	4,483	21,441	85	3,683	28.4%
2006	17,484	4,832	22,315	348	6,729	82.7%
2007	17,981	5,047	23,028	215	7,125	5.9%
2008	17,929	4,558	22,486	-489	6,951	-2.4%
2009	17,323	4,146	21,469	-412	5,163	-25.7%
2010	19,324	4,601	23,925	455	7,539	46.0%
2011	19,797	4,807	24,603	206	8,810	16.9%

Global passenger car and light truck sales and estimated copper content

Source: Bloomberg, Copper Development Association, J.P. Morgan

Date	Vehicles Units	Copper in vehicles sold Metric tonnes
1/31/2000	3,266,986	74,094
2/29/2000	3,592,014	81,466
3/31/2000	4,736,974	107,433
4/30/2000	3,622,470	82,156
5/31/2000	3,966,382	89,956
6/30/2000	3,925,706	89,034
7/31/2000	3,637,599	82,499
8/31/2000	3,258,304	73,897
9/30/2000	3,752,637	85,108
10/31/2000	3,279,887	74,387
11/30/2000	3,267,031	74,095
12/31/2000	2,989,889	67,810
1/31/2001	3,258,523	73,902
2/28/2001	3,343,534	75,830
3/31/2001	4,766,299	108,098
4/30/2001	3,651,263	82,809
5/31/2001	4,082,916	92,599
6/30/2001	4,184,880	94,911
7/31/2001	3,814,844	86,519
8/31/2001	3,305,128	74,959
9/30/2001	3,724,318	84,466
10/31/2001	3,997,198	90,655
11/30/2001	3,578,753	81,165
12/31/2001	3,247,738	73,657
1/31/2002	3,405,781	77,242
2/28/2002	3,521,843	79,874
3/31/2002	4,638,084	105,190
4/30/2002	3,951,043	89,608
5/31/2002	4,032,957	91,466
6/30/2002	4,052,658	91,913
7/31/2002	4,085,823	92,665
8/31/2002	3,557,799	80,690
9/30/2002	3,724,600	84,473
10/31/2002	3,610,536	81,886
11/30/2002	3,387,030	76,817
12/31/2002	3,516,389	79,750
1/31/2003	3,446,153	78,157
2/28/2003	3,490,304	79,159
3/31/2003	4,722,825	107,112
4/30/2003	3,832,156	86,912
5/31/2003	4,079,644	92,525
6/30/2003	4,114,667	93,319
7/31/2003	4,181,745	94,840
8/31/2003	3,538,325	80,248
9/30/2003	4,065,032	92,193
10/31/2003	3,802,528	86,240
11/30/2003	3,568,195	80,925
12/31/2003	3,711,970	84,186
1/31/2004	3,478,434	78,890
2/29/2004	3,617,106	82,035
3/31/2004	5,008,661	113,595
4/30/2004	3,974,182	90,133
5/31/2004	4,160,214	94,352
6/30/2004	4,245,563	96,288
7/31/2004	4,196,031	95,164
8/31/2004	3,410,507	77,349
9/30/2004	4,238,010	96,116
10/31/2004	3,810,989	86,432
11/30/2004	3,724,708	84,475
12/31/2004	4,035,614	91,526
1/31/2005	3,862,383	87,597
2/28/2005	3,924,717	89,011
3/31/2005	5,691,918	129,091
4/30/2005	4,759,938	107,954
5/31/2005	4,623,207	104,853
6/30/2005	5,232,783	118,678
7/31/2005	4,973,898	112,806
8/31/2005	4,115,705	93,343
9/30/2005	4,762,871	108,020
10/31/2005	4,110,491	93,224
11/30/2005	4,289,684	97,288
12/31/2005	4,646,890	105,390
1/31/2006	4,223,095	95,778
2/28/2006	4,191,745	95,067
3/31/2006	5,935,875	134,623
4/30/2006	4,801,294	108,892
5/31/2006	4,914,668	111,463
6/30/2006	5,055,192	114,650
7/31/2006	4,720,293	107,054
8/31/2006	4,280,949	97,090
9/30/2006	5,063,031	114,828
10/31/2006	4,440,517	100,709
11/30/2006	4,636,147	105,146
12/31/2006	4,961,624	112,528
1/31/2007	4,500,514	102,070
2/28/2007	4,290,291	97,302
3/31/2007	6,221,001	141,090
4/30/2007	4,954,411	112,364
5/31/2007	5,376,874	121,945
6/30/2007	5,437,420	123,319
7/31/2007	4,980,762	112,962
8/31/2007	4,746,424	107,647
9/30/2007	5,238,752	118,813
10/31/2007	4,965,775	112,622
11/30/2007	4,998,319	113,360
12/31/2007	5,087,915	115,392
1/31/2008	4,777,598	108,354
2/29/2008	4,530,601	102,752
3/31/2008	6,166,729	139,859
4/30/2008	5,374,953	121,902
5/31/2008	5,318,544	120,623
6/30/2008	5,253,344	119,144
7/31/2008	4,886,555	110,825
8/31/2008	4,234,978	96,048
9/30/2008	4,778,776	108,381
10/31/2008	4,294,730	97,403
11/30/2008	3,620,835	82,119
12/31/2008	3,955,664	89,713
1/31/2009	3,648,737	82,752
2/28/2009	3,891,905	88,267
3/31/2009	5,258,252	119,255
4/30/2009	4,667,103	105,848
5/31/2009	4,821,355	109,346
6/30/2009	5,151,134	116,826
7/31/2009	5,063,518	114,839
8/31/2009	4,723,320	107,123
9/30/2009	5,242,643	118,901
10/31/2009	5,029,995	114,078
11/30/2009	4,943,160	112,109
12/31/2009	5,242,480	118,897
1/31/2010	4,979,510	112,933
2/28/2010	4,648,732	105,431
3/31/2010	6,608,821	149,886
4/30/2010	5,433,101	123,221
5/31/2010	5,425,841	123,056
6/30/2010	5,653,662	128,223
7/31/2010	5,299,296	120,186
8/31/2010	4,910,875	111,377
9/30/2010	5,762,332	130,687
10/31/2010	5,427,714	123,098
11/30/2010	5,584,443	126,653
12/31/2010	5,889,629	133,575
1/31/2011	5,501,371	124,769
2/28/2011	5,114,480	115,994
3/31/2011	6,858,956	155,559
4/30/2011	5,622,892	127,525
5/31/2011	5,529,160	125,399
6/30/2011	5,743,575	130,262
7/31/2011	5,368,545	121,757
8/31/2011	5,198,099	117,891
9/30/2011	6,110,618	138,586
10/31/2011	5,547,789	125,822
11/30/2011	5,705,784	129,405
12/31/2011	6,013,236	136,378
1/31/2012	5,167,503	117,197
2/29/2012	5,708,545	129,468
3/31/2012	7,309,244	165,771
4/30/2012	5,863,314	132,978
5/31/2012	6,257,933	141,928
6/30/2012	6,456,171	146,423

The dollar value and inventory level of intended Trust holdings in context of global inventories and annual production

Source: Wood Mackenzie, LME, CMX, SHFE, J.P. Morgan. Data as of 7/31/2012

	$ millions	thousand metric tonnes
Trust (initial assets)	75	10
Trust (total registered shares)	500	66
Total exchange stocks (LME, CMX, SHFE)	3,495	461
Total liquid LME acceptable grade (non-exchange registered stocks)	7,378	973
Total LME acceptable grade (non-exchange registered stocks)	19,263	2,541
Off-exchange stocks	27,591	3,640
Estimated copper content in global vehicles in operation	121,689	16,052
One year of refined production	153,174	20,205
Total LME stocks	1,886	249
Total CMX stocks	365	48
Total SHFE stocks	1,244	164

LME cash copper prices in nominal and real terms, global unwrought refined copper inventories, total and on-warrant LME copper inventories, global copper refined capacity utilization, and realized volatility of cash copper prices.

GLOBAL REFINED COPPER PRODUCTION	GLOBAL REFINED COPPER CONSUMPTION	INVENTORIES AND CAPACITY UTILIZATION						COPPER PRICES AND REALIZED VOLATILITY			STOCKS TO USE		
	Global refined copper production Brook Hunt	Global refined copper consumption Brook Hunt	Global total stocks Brook Hunt Year-end levels	Estimated average global copper stocks Brook Hunt Avg of year-end	Total LME inventory LME average	On Warrant LME inventory LME average	Global copper refined capacity Brook Hunt	Global refined copper capacity utilization Brook Hunt	Average Cash LME copper price LME LMCADY COMDTY	Average Cash LME copper price LME REAL	Average Cash LME copper realized vol LME	Average Global Stocks divided by Brook Hunt Consumption	Total LME stocks divided by Brook Hunt Consumption	On Warrant LME stocks divided by Brook Hunt Consumption
	kmt	kmt	kmt	kmt	mt	mt	kmt	Percent	US$ per mt	US$ per mt	Percent	Days	Days	Days
1984	9,528	9,670	3,700		242,720	242,720								
1985	9,656	9,858	3,499	3,600	143,477	143,477								
1986	9,952	10,095	3,357	3,428	159,812	159,742			1,357	2,795	13.86	123.94	5.78	5.78
1987	10,196	10,585	2,968	3,162	116,588	99,587			1,783	3,516	22.98	109.04	4.02	3.43
1988	10,644	10,734	2,877	2,923	75,493	76,897			2,602	4,914	46.05	99.38	2.57	2.61
1989	10,945	11,149	2,673	2,775	94,449	93,709			2,843	5,129	43.31	90.85	3.09	3.07
1990	10,832	10,946	2,559	2,616	117,320	118,077			2,663	4,527	34.95	87.23	3.91	3.94
1991	10,710	10,795	2,475	2,517	259,677	259,677			2,337	3,856	32.32	85.11	8.78	8.78
1992	11,131	10,956	2,650	2,562	292,322	292,322	12,822	85.4%	2,283	3,660	20.38	85.37	9.74	9.74
1993	11,275	11,095	2,830	2,740	459,011	459,011	13,058	85.0%	1,911	2,982	20.97	90.15	15.10	15.10
1994	11,166	11,922	2,074	2,452	411,667	415,457	13,383	89.1%	2,313	3,514	23.81	75.08	12.60	12.72
1995	11,813	12,153	1,735	1,905	216,405	216,405	14,201	85.6%	2,937	4,353	21.87	57.21	6.50	6.50
1996	12,675	12,736	1,674	1,704	255,171	255,171	14,807	86.0%	2,292	3,288	28.81	48.85	7.31	7.31
1997	13,535	13,188	2,020	1,847	235,671	233,442	15,814	83.4%	2,276	3,210	37.06	51.12	6.52	6.46
1998	14,067	13,525	2,562	2,291	355,407	344,585	16,849	80.3%	1,653	2,295	25.77	61.83	9.59	9.30
1999	14,495	14,242	2,815	2,689	744,479	731,564	17,404	81.8%	1,578	2,133	20.85	68.90	19.08	18.75
2000	14,844	15,160	2,498	2,657	571,053	514,005	17,457	86.8%	1,814	2,371	19.44	63.96	13.75	12.38
2001	15,656	14,783	3,371	2,935	545,480	523,967	18,031	82.0%	1,580	2,034	16.58	72.46	13.47	12.94
2002	15,351	14,894	3,829	3,600	892,001	855,457	18,136	82.1%	1,559	1,960	17.63	88.23	21.86	20.96
2003	15,277	15,575	3,531	3,680	676,636	636,202	18,543	84.0%	1,780	2,198	16.96	86.24	15.86	14.91
2004	15,935	17,021	2,445	2,988	156,537	113,493	18,920	90.0%	2,866	3,426	22.93	64.07	3.36	2.43
2005	16,595	16,957	2,082	2,263	55,070	47,127	19,897	85.2%	3,681	4,256	27.48	48.72	1.19	1.01
2006	17,296	17,484	1,894	1,988	118,951	109,165	20,648	84.7%	6,740	7,598	30.05	41.50	2.48	2.28
2007	18,025	17,981	1,938	1,916	158,357	148,453	21,819	82.4%	7,139	7,733	37.47	38.89	3.21	3.01
2008	18,260	17,929	2,270	2,104	175,360	161,302	22,709	78.9%	6,959	7,531	33.14	42.83	3.57	3.28
2009	18,306	17,323	3,252	2,761	386,777	367,410	23,626	73.3%	5,178	5,455	47.95	58.17	8.15	7.74
2010	18,975	19,324	2,904	3,078	446,885	423,667	24,061	80.3%	7,543	7,843	38.33	58.14	8.44	8.00
2011	19,686	19,797	2,793	2,849	437,220	413,871	25,073	79.0%	8,813	8,813	27.89	52.52	8.06	7.63

China's imports of unwrought copper in quantity and dollar terms

Units: Import quantity in thousand metric tonnes (LHS), nominal value of imports in US$ (RHS)
Source: China Customs, LME, J.P. Morgan

Date	Imports of unwrought copper	
	Quantity	nominal US$
1/30/2004	129.8	$314
2/27/2004	168.6	$464
3/31/2004	132.0	$396
4/30/2004	149.7	$438
5/31/2004	69.4	$189
6/30/2004	105.7	$284
7/30/2004	87.0	$245
8/31/2004	89.4	$254
9/30/2004	119.9	$348
10/29/2004	83.8	$252
11/30/2004	125.2	$392
12/31/2004	120.6	$379
1/31/2005	127.3	$403
2/28/2005	121.7	$395
3/31/2005	116.7	$394
4/29/2005	122.3	$415
5/31/2005	134.7	$437
6/30/2005	152.9	$540
7/29/2005	115.5	$417
8/31/2005	143.6	$545
9/30/2005	128.7	$496
10/31/2005	88.3	$358
11/30/2005	84.8	$363
12/30/2005	78.7	$360
1/31/2006	87.0	$413
2/28/2006	64.1	$319
3/31/2006	91.8	$470
4/28/2006	80.6	$516
5/31/2006	57.3	$462
6/30/2006	77.3	$558
7/31/2006	81.5	$629
8/31/2006	91.7	$705
9/29/2006	81.5	$621
10/31/2006	76.9	$577
11/30/2006	79.0	$555
12/29/2006	111.2	$743
1/31/2007	147.7	$840
2/28/2007	174.1	$995
3/30/2007	219.4	$1,418
4/30/2007	205.1	$1,590
5/31/2007	130.0	$998
6/29/2007	122.0	$917
7/31/2007	116.9	$933
8/31/2007	104.8	$786
9/28/2007	124.0	$951
10/31/2007	118.5	$951
11/30/2007	132.6	$923
12/31/2007	133.4	$884
1/31/2008	158.1	$1,119
2/29/2008	158.2	$1,256
3/31/2008	152.7	$1,288
4/30/2008	148.1	$1,290
5/30/2008	111.0	$927
6/30/2008	91.8	$761
7/31/2008	102.4	$860
8/29/2008	101.3	$773
9/30/2008	133.0	$928
10/31/2008	156.3	$765
11/28/2008	158.6	$591
12/31/2008	232.7	$723
1/30/2009	201.8	$658
2/27/2009	283.5	$943
3/31/2009	310.9	$1,172
4/30/2009	334.7	$1,485
5/29/2009	354.6	$1,628
6/30/2009	402.6	$2,019
7/31/2009	326.4	$1,707
8/31/2009	248.9	$1,537
9/30/2009	314.0	$1,945
10/30/2009	193.2	$1,218
11/30/2009	219.4	$1,466
12/31/2009	276.5	$1,929
1/29/2010	227.4	$1,675
2/26/2010	259.4	$1,781
3/31/2010	367.8	$2,747
4/30/2010	350.3	$2,708
5/31/2010	313.0	$2,142
6/30/2010	245.7	$1,597
7/30/2010	264.4	$1,785
8/31/2010	303.2	$2,214
9/30/2010	291.3	$2,251
10/29/2010	206.8	$1,714
11/30/2010	279.9	$2,367
12/31/2010	271.1	$2,481
1/31/2011	291.8	$2,782
2/28/2011	183.1	$1,809
3/31/2011	229.1	$2,177
4/29/2011	191.9	$1,820
5/31/2011	191.2	$1,707
6/30/2011	213.6	$1,936
7/29/2011	240.9	$2,325
8/31/2011	270.5	$2,434
9/30/2011	314.0	$2,606
10/31/2011	330.3	$2,442
11/30/2011	389.0	$2,949
12/30/2011	446.5	$3,375
1/31/2012	369.6	$2,980
2/29/2012	425.5	$3,592
3/30/2012	397.6	$3,368
4/30/2012	318.1	$2,636
5/31/2012	359.6	$2,839
6/29/2012	291.1	$2,163

LME un-cancelled copper warrants by location
Units: Metric tonnes
Source: LME

Date	Baltimore	Chicago	Mobile	New Orleans	St Louis	Johor	Port Klang	Singapore	Busan	Gwanyang	Incheon	Antwerp	Hamburg	Leghorn	Trieste	Rotterdam	Vlissingen	Barcelona	Bilbao	Helsinki	Hull	Liverpool	Dubai
31-Jan-01	28,550	-	-	111,800	-	-	-	29,775	-	-	-	800	14,725	6,125	-	15,225	-	11,375	34,525	2,375	25	1,450	-
28-Feb-01	27,175	-	-	109,875	-	-	-	34,875	-	-	-	750	7,550	5,925	-	900	-	9,725	34,525	2,175	25	-	-
31-Mar-01	29,425	-	-	136,200	-	-	-	43,775	-	-	-	-	950	7,950	-	18,350	-	7,275	34,375	14,050	25	-	-
30-Apr-01	46,075	-	-	151,225	-	-	-	42,450	-	-	-	500	9,000	10,850	-	9,575	-	5,675	29,375	13,925	25	2,675	-
31-May-01	47,950	-	-	159,075	-	-	-	41,900	-	-	-	500	4,525	10,275	-	8,325	1,400	3,100	26,725	13,175	25	4,175	-
30-Jun-01	55,575	-	-	169,325	-	-	-	40,325	-	-	-	500	475	8,900	-	4,625	1,400	2,700	27,775	12,875	-	3,675	-
31-Jul-01	83,850	-	-	208,950	-	-	-	53,625	-	-	-	2,500	14,650	32,400	-	18,275	7,600	1,900	28,450	22,050	-	2,475	-
31-Aug-01	77,450	-	-	232,675	-	-	-	37,925	-	-	-	2,000	14,650	28,275	200	10,725	7,600	1,500	34,775	28,725	-	2,125	-
30-Sep-01	154,800	-	-	233,150	2,900	-	-	18,550	-	-	-	1,850	14,950	27,575	200	14,975	7,600	9,000	34,775	28,725	-	2,375	-
31-Oct-01	147,450	-	-	236,250	3,650	-	-	19,150	-	-	-	1,850	11,075	21,875	200	15,075	7,600	8,975	35,675	23,650	-	3,775	-
30-Nov-01	160,450	-	-	248,200	3,650	-	-	20,450	-	-	-	1,750	8,725	15,875	-	12,975	17,150	8,975	37,000	23,650	-	5,750	-
31-Dec-01	190,375	-	-	261,225	3,650	-	-	20,000	-	-	-	2,125	9,925	15,900	50	24,600	18,375	8,975	37,250	23,650	-	8,125	-
31-Jan-02	195,800	-	-	294,625	3,650	-	-	22,725	-	-	-	4,125	7,800	15,950	75	24,175	27,650	8,800	41,325	23,650	-	10,675	-
28-Feb-02	204,375	-	-	306,750	3,650	-	-	27,900	-	-	-	1,675	6,875	13,600	75	28,550	32,950	11,875	42,175	23,650	4,025	11,150	-
31-Mar-02	210,375	-	-	289,100	3,650	-	-	26,275	-	-	-	2,525	6,650	10,200	25	28,550	39,575	25,075	51,025	23,650	4,025	12,225	-
30-Apr-02	215,025	-	-	306,600	3,650	-	-	27,450	-	-	-	2,525	6,050	11,050	25	27,100	33,675	30,875	62,150	23,650	4,025	13,925	5,000
31-May-02	208,250	-	-	291,375	3,650	-	-	23,600	-	-	-	2,225	5,550	6,300	-	26,575	23,250	9,375	63,175	23,650	4,025	14,925	28,850
30-Jun-02	207,475	-	-	294,100	3,650	-	-	15,900	-	-	-	2,225	4,500	6,300	-	24,975	22,650	13,250	63,575	22,525	9,025	16,100	30,250
31-Jul-02	190,275	-	-	297,475	2,925	-	-	13,150	-	-	-	2,225	3,025	4,100	100	23,975	20,925	11,525	64,275	22,525	9,025	17,525	42,700
31-Aug-02	177,075	-	-	305,475	2,925	-	-	12,500	-	-	-	1,950	2,775	3,050	75	23,925	31,275	10,150	66,875	21,525	8,825	19,625	51,775
30-Sep-02	157,600	-	-	317,150	2,925	-	-	4,450	-	-	-	1,325	2,775	75	50	23,675	29,925	8,750	66,375	16,975	8,825	20,525	51,750
31-Oct-02	140,925	-	-	316,950	2,925	-	-	4,350	-	-	-	1,075	2,775	50	-	22,925	31,875	7,050	67,400	16,075	8,825	19,150	61,750
30-Nov-02	119,750	-	-	332,350	1,250	-	-	4,750	-	-	-	1,075	2,775	-	-	21,925	29,375	7,050	67,700	16,075	8,825	19,450	60,575
31-Dec-02	117,375	-	-	333,425	1,250	-	-	4,850	-	-	-	1,075	2,375	-	-	22,925	31,375	9,750	67,700	16,075	8,825	18,350	58,150
31-Jan-03	104,475	-	-	322,750	1,250	-	-	7,775	-	-	-	1,075	1,975	-	-	23,175	32,775	14,725	67,700	13,075	8,825	19,300	55,900
28-Feb-03	98,075	-	-	302,950	1,250	-	-	7,550	-	-	-	1,075	1,975	-	27,275	22,700	30,875	14,725	65,750	9,800	8,825	20,350	52,900
31-Mar-03	101,375	-	-	279,400	-	-	-	5,825	-	-	-	550	1,975	-	27,275	19,425	26,525	14,725	64,800	3,975	8,450	20,225	52,800
30-Apr-03	96,375	-	-	274,775	-	-	-	2,675	-	-	-	50	1,975	-	27,275	12,500	23,700	14,725	62,600	3,475	6,650	21,725	47,600
31-May-03	78,275	-	-	269,425	-	-	-	9,575	-	-	-	-	1,575	-	27,275	9,525	22,450	12,225	44,000	1,675	9,000	41,300	29,900
30-Jun-03	60,750	-	-	264,525	-	-	-	8,525	-	-	-	-	1,175	-	29,400	8,375	19,100	6,150	44,000	1,275	7,000	43,050	21,175
31-Jul-03	47,750	-	-	246,575	-	-	-	7,925	-	-	-	-	875	-	29,700	1,600	24,150	6,150	43,475	1,275	5,500	44,050	6,250
31-Aug-03	64,300	-	-	261,225	-	-	-	7,775	-	-	-	-	575	-	23,850	1,100	21,150	6,150	45,325	1,275	4,150	45,025	2,975
30-Sep-03	56,000	-	-	236,525	-	-	-	7,625	-	-	-	-	275	-	12,750	1,100	20,150	6,150	45,075	1,275	4,150	39,575	3,375
31-Oct-03	55,700	-	-	221,800	-	-	-	5,575	-	-	-	-	-	-	2,875	1,975	18,400	6,125	44,575	1,275	4,150	39,200	2,375
30-Nov-03	51,800	-	-	214,350	-	-	-	1,075	-	-	-	-	-	-	300	975	8,800	3,700	42,575	-	3,000	31,175	1,000
31-Dec-03	60,275	-	-	208,800	-	-	-	-	-	-	-	-	-	1,875	-	975	5,850	3,700	31,125	-	3,000	29,525	-
31-Jan-04	36,600	-	-	168,475	-	-	-	-	-	-	-	-	-	650	-	250	275	700	15,325	-	2,500	21,775	-
29-Feb-04	3,600	-	-	138,925	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9,600	-	-	17,300	-
31-Mar-04	700	-	-	107,675	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3,600	-	-	9,750	-
30-Apr-04	700	-	-	100,900	-	-	-	-	-	2,000	-	-	-	-	1,000	-	5,550	-	2,350	-	-	10,075	-
31-May-04	700	-	-	80,575	-	-	-	1,500	100	3,375	-	-	-	-	-	-	1,200	-	475	-	-	7,525	-
30-Jun-04	-	-	-	70,150	-	-	-	4,300	-	2,200	-	-	-	-	-	-	50	-	475	-	-	-	-
31-Jul-04	-	-	-	59,700	-	-	-	3,575	-	2,675	-	-	-	-	-	-	-	-	475	-	-	-	-
31-Aug-04	-	-	-	48,775	-	800	-	22,975	3,025	9,050	-	-	-	-	-	-	-	-	475	-	-	-	-
30-Sep-04	-	-	-	31,525	-	1,100	-	18,000	3,025	1,050	-	-	-	-	-	-	-	-	50	50	-	-	1,600
31-Oct-04	25	-	-	24,975	-	1,200	-	22,075	4,975	2,050	-	-	-	-	-	-	-	-	50	50	-	-	1,600
30-Nov-04	25	-	-	16,675	-	1,200	-	10,600	925	1,875	-	-	-	-	-	1,700	-	-	50	350	-	-	800
31-Dec-04	2,400	-	-	16,475	-	1,125	-	8,975	425	1,075	-	-	-	-	-	1,275	-	-	50	650	-	-	-
31-Jan-05	4,650	-	-	14,575	-	1,125	-	3,425	125	975	-	-	-	1,750	-	700	-	-	50	1,050	-	-	-
28-Feb-05	4,650	-	-	16,050	-	1,025	-	2,925	125	925	-	-	2,225	3,600	400	4,150	800	-	50	1,225	-	-	-
31-Mar-05	5,250	-	-	13,925	-	25	-	25	525	750	-	-	-	1,900	400	2,475	800	-	550	1,225	-	-	-
30-Apr-05	5,250	-	-	13,250	-	-	-	-	425	650	-	-	-	350	250	9,750	6,625	-	2,575	-	-	-	-
31-May-05	7,125	-	-	4,525	-	-	-	-	-	100	-	-	-	-	400	5,300	2,475	-	4,450	-	-	-	-
30-Jun-05	5,675	-	-	4,025	-	-	-	-	1,250	100	-	-	-	200	-	350	75	-	1,550	-	-	-	-
31-Jul-05	5,200	-	-	3,375	-	500	-	300	650	-	-	-	-	-	-	4,300	225	-	2,425	-	3,700	-	-
31-Aug-05	1,050	-	-	875	-	200	-	3,550	4,875	-	-	-	-	1,125	875	13,775	3,600	-	4,725	-	16,375	-	-
30-Sep-05	-	-	-	875	-	300	-	8,025	10,875	14,900	-	-	1,900	-	200	11,150	3,500	-	4,975	-	1,525	-	-
31-Oct-05	-	-	-	-	-	300	-	12,700	16,375	16,700	-	-	100	-	-	-	300	-	4,950	-	50	-	-
30-Nov-05	-	-	-	-	-	100	-	10,275	31,775	16,700	-	-	-	-	-	-	-	-	75	-	-	-	-
31-Dec-05	-	-	-	-	-	100	-	12,300	43,925	19,800	-	-	-	-	-	3,600	-	-	1,825	-	-	-	1,675
31-Jan-06	-	-	-	-	-	100	-	6,875	58,700	13,450	-	-	750	-	-	1,275	-	-	2,550	-	900	-	3,725
28-Feb-06	-	-	-	-	-	100	-	11,050	69,150	22,775	-	-	-	-	-	-	-	-	100	-	-	-	2,725
31-Mar-06	1,025	-	-	350	-	100	-	7,600	79,250	23,175	-	-	-	-	-	-	-	-	25	-	-	-	-
30-Apr-06	-	-	-	350	-	-	-	7,600	80,825	19,250	-	-	-	-	-	-	-	-	25	-	-	-	-
31-May-06	-	-	-	350	-	-	-	19,275	58,350	11,150	-	-	-	500	-	2,450	-	-	25	-	-	-	-
30-Jun-06	-	-	-	-	-	-	-	18,875	47,225	21,025	-	-	-	-	-	-	-	-	25	-	-	-	-
31-Jul-06	-	-	-	-	-	-	-	22,175	45,725	23,850	-	-	-	-	-	-	-	-	25	-	-	-	-
31-Aug-06	-	-	-	-	-	-	-	43,675	42,300	25,050	-	-	-	-	-	-	-	-	25	-	3,100	-	-
30-Sep-06	-	-	-	800	-	-	-	44,500	31,975	25,650	-	-	-	-	-	-	-	-	25	-	2,900	-	50
31-Oct-06	1,000	-	-	5,650	2,050	-	-	51,875	27,375	26,250	-	-	-	-	2,000	2,000	-	-	25	-	1,650	-	150
30-Nov-06	7,475	-	-	19,400	4,100	-	-	42,350	22,250	27,175	-	-	-	1,200	2,000	5,975	-	-	25	-	1,500	-	150
31-Dec-06	17,650	-	-	40,025	9,175	-	-	29,675	22,850	23,325	-	-	-	2,200	2,000	14,500	-	-	725	3,350	5,400	-	150
31-Jan-07	15,375	-	-	50,500	19,075	-	-	13,925	4,700	10,525	-	3,650	-	13,350	2,000	46,250	10,150	-	925	2,350	6,150	-	150
28-Feb-07	7,700	-	-	50,075	25,500	-	-	7,375	2,800	7,050	-	1,500	-	15,500	2,000	42,500	10,150	-	2,075	2,500	7,350	-	150
31-Mar-07	25	-	-	47,050	30,650	-	-	5,925	1,800	3,350	-	925	-	14,350	1,600	40,050	10,150	-	875	2,375	5,225	-	150
30-Apr-07	25	-	-	39,950	23,925	-	-	6,375	2,700	3,700	-	675	-	15,325	1,650	30,800	8,200	-	650	2,375	3,575	-	25
31-May-07	25	-	-	31,450	16,675	-	-	6,525	6,300	6,450	-	675	-	15,525	1,850	16,200	7,700	-	650	1,250	2,925	-	25
30-Jun-07	25	-	-	14,700	12,500	-	-	6,275	10,650	13,675	-	675	-	12,625	1,725	6,525	-	-	650	1,150	2,250	-	25
31-Jul-07	25	-	-	13,500	11,700	-	-	9,200	20,550	18,625	-	675	-	5,850	1,625	4,175	-	-	1,500	1,050	2,250	-	25
31-Aug-07	275	-	-	16,950	11,600	-	-	15,150	33,375	34,800	-	675	-	6,100	2,475	5,900	-	-	2,350	-	2,250	-	25
30-Sep-07	275	-	-	18,550	10,100	475	-	10,725	34,675	34,575	-	675	-	5,675	2,975	6,675	-	-	2,350	-	2,050	-	25
31-Oct-07	275	-	-	23,125	13,675	725	-	15,825	41,125	34,575	-	675	-	8,050	4,225	14,300	4,450	-	2,600	-	2,050	-	25
30-Nov-07	275	-	-	28,100	17,850	725	-	13,625	43,150	35,375	-	1,075	-	11,300	4,250	17,450	5,825	-	2,625	-	1,725	200	25
31-Dec-07	75	-	-	35,650	23,050	125	-	13,000	41,075	35,175	-	700	-	10,500	5,200	14,200	7,300	-	2,775	-	1,725	200	25
31-Jan-08	75	-	-	21,825	21,450	125	-	10,050	15,350	28,850	-	1,725	-	8,025	5,175	14,500	9,325	-	3,275	-	8,725	200	25
29-Feb-08	75	-	-	10,650	19,750	125	-	7,625	20,225	24,675	-	150	-	3,750	3,125	2,550	6,325	-	-	-	12,400	200	25
31-Mar-08	-	-	-	1,200	11,400	125	-	8,500	20,400	24,450	-	-	-	3,000	2,900	1,625	2,850	-	-	-	13,450	200	25
30-Apr-08	-	-	-	1,200	8,425	3,625	-	11,675	27,200	25,900	2,500	-	-	3,525	2,700	1,575	2,850	1,100	325	-	6,950	200	25
31-May-08	-	-	550	2,825	8,425	4,350	-	11,075	28,750	35,000	3,250	-	-	3,825	3,275	1,500	2,850	1,325	625	-	4,450	200	25
30-Jun-08	-	-	10,375	1,550	8,100	3,475	-	10,225	30,250	35,000	3,450	-	-	4,725	2,275	275	700	1,800	725	-	2,575	200	25
31-Jul-08	-	-	8,675	2,525	13,125	2,675	-	12,200	27,225	34,050	3,650	2,025	2,700	2,900	2,875	6,650	700	300	2,100	-	2,825	200	25
31-Aug-08	-	-	11,825	12,725	14,250	1,075	-	13,300	29,400	34,175	5,750	2,025	4,200	5,825	3,150	14,425	1,475	-	5,150	-	2,825	200	25
30-Sep-08	-	-	16,200	21,200	21,850	425	-	9,000	39,225	29,675	5,700	2,025	5,250	6,275	3,250	15,525	2,250	600	12,875	-	2,600	300	25
31-Oct-08	-	-	17,950	23,425	30,300	175	-	9,525	35,325	23,950	5,675	2,025	10,125	5,875	3,250	32,500	6,225	1,250	16,700	-	2,350	300	25
30-Nov-08	1,025	-	21,650	32,000	33,650	175	-	9,000	34,200	22,900	1,350	2,025	9,925	19,175	3,250	63,900	7,625	2,100	18,150	-	2,275	300	25
31-Dec-08	625	2,625	23,125	42,225	36,150	-	-	11,200	36,550	22,900	1,575	1,825	15,875	22,000	3,250	82,125	7,625	2,200	20,650	-	2,200	300	25
31-Jan-09	3,075	3,375	23,125	89,925	43,625	3,800	-	15,625	46,100	22,900	1,575	1,825	16,075	41,775	3,250	112,775	11,625	2,200	31,025	-	10,775	300	325
28-Feb-09	3,075	3,375	23,125	120,500	49,125	3,900	-	16,600	29,025	7,550	475	8,175	19,075	54,900	3,250	111,900	11,575	1,625	26,900	-	9,925	300	325
31-Mar-09	3,075	3,375	23,125	152,575	55,875	1,100	-	8,200	16,125	4,000	50	12,875	19,075	32,750	2,400	94,150	7,950	1,625	18,400	-	6,900	6,800	2,725
30-Apr-09	225	4,275	20,825	142,300	55,600	-	-	25	850	-	25	11,500	12,500	16,675	925	32,500	2,400	1,625	13,900	-	750	4,575	300
31-May-09	-	5,400	12,000	115,075	51,500	-	-	25	1,900	-	25	11,500	6,525	12,175	900	24,825	225	1,625	15,875	-	750	13,125	-
30-Jun-09	-	8,075	12,000	114,800	46,625	-	-	800	1,000	-	25	8,000	4,200	7,375	150	22,625	-	1,625	14,900	-	200	12,925	-
31-Jul-09	-	8,950	9,875	122,300	53,575	-	-	3,950	9,525	-	25	2,750	4,200	2,100	150	22,700	-	1,625	13,850	-	200	12,925	-
31-Aug-09	-	12,375	9,875	130,100	59,475	-	-	1,275	20,050	-	225	1,575	3,625	1,100	150	24,975	-	925	12,850	-	100	13,050	-
30-Sep-09	-	14,875	9,875	132,675	64,200	-	-	5,025	45,150	650	550	1,575	3,625	5,100	150	30,450	-	925	11,750	-	-	12,725	500
31-Oct-09	-	18,500	9,875	135,050	68,550	-	-	9,950	51,650	850	2,500	2,325	7,275	3,950	250	33,000	-	425	11,700	-	-	12,200	500
30-Nov-09	-	22,275	9,875	148,850	74,700	-	-	16,950	78,175	850	4,975	2,325	12,275	4,100	200	35,900	350	425	13,200	-	-	11,225	500
31-Dec-09	-	25,550	9,875	168,675	79,250	3,575	-	25,350	96,400	5,525	6,775	2,325	12,025	4,725	350	34,725	-	-	13,200	-	-	10,875	500
31-Jan-10	-	26,675	9,875	200,175	78,750	7,275	1,000	25,600	91,525	2,825	5,975	2,325	12,025	7,425	1,100	35,825	-	-	12,200	-	-	10,800	500
28-Feb-10	-	28,275	12,225	210,150	80,875	4,350	1,000	24,775	79,700	1,225	4,700	2,325	9,825	6,925	1,150	40,025	-	-	12,800	-	-	9,425	500
31-Mar-10	-	29,650	11,375	202,600	81,025	3,225	1,000	19,250	76,150	2,225	5,250	750	8,825	6,375	1,300	27,300	-	-	12,800	-	-	6,175	500
30-Apr-10	-	31,675	10,675	188,175	83,950	4,125	1,000	13,550	70,450	3,225	5,650	750	8,825	6,175	950	27,425	-	-	11,925	-	-	3,850	500
31-May-10	-	31,675	10,175	175,275	84,900	3,925	1,000	11,350	71,175	3,225	5,650	750	8,825	6,325	850	25,600	-	-	10,925	-	-	2,400	-
30-Jun-10	-	31,425	9,075	165,800	85,025	3,475	1,000	8,575	56,225	2,100	3,350	750	8,825	4,125	1,000	24,725	-	-	9,850	-	-	1,200	-
31-Jul-10	-	32,425	5,325	154,650	87,325	3,175	575	9,100	39,625	1,425	3,575	750	8,825	4,775	350	21,875	-	-	6,550	-	-	500	-
31-Aug-10	-	32,375	4,425	145,850	88,775	4,175	300	10,075	35,425	725	3,975	750	8,825	4,450	350	20,950	-	-	6,550	-	-	300	-
30-Sep-10	-	31,750	4,425	137,150	90,775	3,800	-	9,725	35,550	1,225	4,375	750	8,825	3,850	125	15,650	-	-	4,125	-	-	300	-
31-Oct-10	-	36,825	4,425	113,350	94,475	3,375	-	9,950	35,550	1,725	4,875	750	8,825	4,150	-	17,300	-	-	2,600	-	-	275	-
30-Nov-10	-	37,575	4,425	104,200	95,450	2,475	-	10,875	33,375	1,150	4,425	750	8,825	3,400	-	14,250	-	-	2,025	-	-	275	-
31-Dec-10	4,425	36,425	6,425	118,625	102,250	1,900	25	11,175	40,800	3,700	5,025	750	8,625	3,375	-	12,750	-	-	1,525	-	-	275	-
31-Jan-11	2,675	29,425	6,425	125,050	99,350	1,500	25	14,400	57,225	3,900	5,675	750	7,950	3,175	-	16,025	-	-	1,525	-	-	75	-
28-Feb-11	675	33,775	6,425	117,075	98,575	1,500	25	20,475	62,700	21,475	10,925	750	7,750	3,025	-	15,500	-	-	1,525	-	-	75	-
31-Mar-11	675	33,875	6,425	109,475	98,750	500	1,025	31,775	63,650	39,300	12,125	750	7,750	3,225	-	15,225	-	-	1,525	-	-	75	-
30-Apr-11	675	33,275	6,225	99,750	96,875	1,000	2,275	34,175	70,075	55,725	12,625	750	8,250	5,175	500	13,200	-	-	1,525	-	-	75	-
31-May-11	675	32,825	6,100	102,625	94,625	1,000	6,050	42,225	66,075	53,025	12,825	750	8,200	5,175	500	13,050	-	-	1,525	-	350	75	-
30-Jun-11	675	24,950	5,250	102,250	96,600	4,500	7,025	45,000	64,325	44,500	13,125	750	7,900	6,250	500	17,325	-	-	1,525	-	125	75	-
31-Jul-11	675	32,975	4,800	110,350	97,825	3,650	8,325	44,450	62,325	41,325	13,525	750	6,900	5,450	500	14,850	-	-	1,525	-	1,650	75	-
31-Aug-11	675	35,450	3,875	112,325	98,150	3,650	6,300	43,500	60,200	41,075	12,500	425	7,900	5,750	575	23,100	-	-	1,525	-	975	75	-
30-Sep-11	575	38,525	3,875	115,575	98,250	3,450	5,175	41,300	49,250	32,175	2,650	425	7,800	5,525	1,050	28,925	5,225	-	1,525	-	325	75	-
31-Oct-11	575	40,475	3,375	121,875	98,875	3,450	175	12,150	21,725	19,150	1,675	425	7,800	6,775	1,550	29,975	5,450	-	1,525	-	175	75	-
30-Nov-11	575	44,200	3,275	123,400	99,350	2,125	175	10,950	20,250	6,400	1,275	425	7,800	5,825	4,025	28,625	2,725	-	1,025	-	-	75	-
31-Dec-11	225	46,525	2,825	106,425	103,700	1,025	150	9,750	10,325	6,225	1,075	350	1,575	6,225	500	27,700	1,125	-	1,025	-	-	75	-
31-Jan-12	225	40,075	775	43,525	95,425	725	150	9,450	8,475	1,975	1,075	250	1,075	6,250	25	22,700	825	-	600	-	-	75	-
29-Feb-12	225	34,575	425	44,325	64,650	725	125	10,050	8,050	1,475	1,000	175	1,075	11,300	25	22,450	1,675	-	100	-	-	75	-
31-Mar-12	1,025	25,825	100	43,425	50,200	725	125	7,675	8,075	775	1,200	675	425	7,750	25	22,175	1,675	-	25	-	-	75	-
30-Apr-12	5,025	17,400	100	47,275	53,700	725	75	5,300	7,150	5,300	525	500	425	500	25	8,250	2,175	-	25	-	250	75	-
31-May-12	5,000	16,625	100	40,775	64,050	1,425	75	10,525	38,150	16,600	925	125	325	500	25	11,125	2,650	-	25	-	-	75	-
30-Jun-12	4,825	15,250	100	30,475	55,950	10,325	75	15,575	50,050	33,550	925	125	175	1,000	25	5,950	4,650	-	25	-	225	75	-
31-Jul-12	-	11,875	100	35,300	55,350	12,250	75	15,850	35,600	18,025	925	-	-	1,500	25	2,525	10,150	-	25	-	550	-	-

LME cancelled copper warrants by location
Metric tonnes
Source: LME

Date	Baltimore	Chicago	Mobile	New Orleans	St Louis	Johor	Port Klang	Singapore	Busan	Gwanyang	Incheon	Antwerp	Hamburg	Leghorn	Trieste	Rotterdam	Vlissingen	Barcelona	Bilbao	Helsinki	Hull	Liverpool	Dubai
31-Jan-01	650	-	-	11,300	-	-	-	1,200	-	-	-	525	4,875	400	-	1,500	-	225	-	50	-	325	-
28-Feb-01	-	-	-	7,850	-	-	-	1,000	-	-	-	100	2,600	400	-	11,325	-	100	-	-	-	300	-
31-Mar-01	25	-	-	3,075	-	-	-	2,350	-	-	-	25	1,900	575	-	4,225	-	2,100	150	-	-	50	-
30-Apr-01	150	-	-	2,325	-	-	-	1,725	-	-	-	25	2,600	475	-	5,875	-	1,100	2,825	-	-	50	-
31-May-01	125	-	-	125	-	-	-	3,275	-	-	-	25	575	525	-	3,225	-	75	-	275	-	50	-
30-Jun-01	-	-	-	75	-	-	-	875	-	-	-	25	425	825	-	5,275	-	-	-	-	-	-	-
31-Jul-01	-	-	-	25	-	-	-	1,400	-	-	-	25	225	775	-	275	-	400	-	-	-	100	-
31-Aug-01	6,875	-	-	50	-	-	-	3,175	-	-	-	25	250	975	-	-	-	-	-	-	-	-	-
30-Sep-01	3,575	-	-	1,150	-	-	-	9,825	-	-	-	175	100	425	-	675	-	-	-	-	-	-	-
31-Oct-01	18,775	-	-	3,475	-	-	-	450	-	-	-	175	375	100	-	650	-	-	-	-	-	-	-
30-Nov-01	13,575	-	-	4,400	-	-	-	425	-	-	-	25	325	100	150	1,950	500	-	-	-	-	-	-
31-Dec-01	8,100	-	-	350	-	-	-	525	-	-	-	25	100	100	-	-	-	-	-	-	-	-	-
31-Jan-02	5,525	-	-	25	-	-	-	450	-	-	-	25	325	200	-	250	250	175	-	-	-	-	-
28-Feb-02	2,050	-	-	12,325	-	-	-	550	-	-	-	1,950	325	250	-	-	1,400	-	-	-	-	50	-
31-Mar-02	6,525	-	-	38,700	-	-	-	575	-	-	-	1,875	250	1,275	-	-	100	400	-	-	-	350	-
30-Apr-02	3,850	-	-	28,950	-	-	-	1,500	-	-	-	825	50	250	-	-	1,575	1,025	-	-	-	400	-
31-May-02	5,050	-	-	41,175	-	-	-	125	-	-	-	25	-	325	25	-	10,075	12,575	-	-	-	600	-
30-Jun-02	6,100	-	-	4,725	-	-	-	1,300	-	-	-	25	-	150	-	-	75	1,550	-	-	-	400	-
31-Jul-02	13,800	-	-	11,000	375	-	-	675	-	-	-	25	775	150	-	500	200	500	-	-	-	700	-
31-Aug-02	13,775	-	-	9,225	-	-	-	375	-	-	-	25	100	175	-	-	100	1,575	-	-	-	900	-
30-Sep-02	20,875	-	-	5,725	-	-	-	2,325	-	-	-	125	-	250	25	-	575	775	-	1,100	-	-	25
31-Oct-02	19,225	-	-	9,025	-	-	-	200	-	-	-	25	-	125	50	575	1,300	1,600	-	500	-	-	25
30-Nov-02	32,900	-	-	2,100	1,675	-	-	500	-	-	-	25	-	100	-	225	1,500	-	-	-	-	-	2,800
31-Dec-02	21,800	-	-	6,825	1,675	-	-	550	-	-	-	25	300	-	-	-	525	-	-	-	-	1,400	2,025
31-Jan-03	13,375	-	-	11,200	-	-	-	500	-	-	-	25	-	50	-	-	2,200	1,000	-	-	-	3,325	2,800
28-Feb-03	6,025	-	-	20,700	-	-	-	600	-	-	-	25	-	-	-	275	1,925	-	1,450	-	-	1,400	1,350
31-Mar-03	3,975	-	-	26,225	1,250	-	-	1,250	-	-	-	525	-	-	-	2,525	575	-	-	4,425	300	-	-
30-Apr-03	5,350	-	-	13,000	-	-	-	100	-	-	-	175	-	-	-	2,975	-	-	1,000	1,875	950	-	2,900
31-May-03	20,000	-	-	10,875	-	-	-	1,100	-	-	-	175	250	-	-	3,700	-	975	10,575	800	1,100	-	10,600
30-Jun-03	18,200	-	-	7,000	-	-	-	700	-	-	-	175	250	-	-	350	1,700	5,150	-	-	1,025	-	5,075
31-Jul-03	14,825	-	-	20,025	-	-	-	-	-	-	-	175	275	-	-	-	-	-	100	-	500	-	4,100
31-Aug-03	5,575	-	-	10,675	-	-	-	-	-	-	-	175	300	-	5,975	75	1,325	-	-	-	1,350	-	1,200
30-Sep-03	4,300	-	-	21,425	-	-	-	100	-	-	-	175	-	-	7,850	-	1,025	-	-	-	150	4,300	1,000
31-Oct-03	1,400	-	-	14,225	-	-	-	850	-	-	-	175	100	-	6,775	175	1,750	25	-	-	-	275	500
30-Nov-03	4,175	-	-	11,875	-	-	-	3,675	-	-	-	175	-	-	200	675	7,750	2,425	-	-	1,150	3,325	1,100
31-Dec-03	4,625	-	-	9,250	-	-	-	300	-	-	-	175	-	7,600	25	-	2,475	-	4,800	-	575	2,850	400
31-Jan-04	21,875	-	-	29,100	-	-	-	-	-	-	-	175	-	4,950	25	600	1,550	2,100	11,625	-	-	6,500	300
29-Feb-04	42,325	-	-	38,150	-	-	-	-	-	-	-	25	-	4,175	25	450	-	-	6,800	-	150	2,175	300
31-Mar-04	18,250	-	-	34,450	-	-	-	-	-	-	-	25	-	2,475	25	200	200	-	775	-	150	2,500	-
30-Apr-04	4,825	-	-	13,400	-	-	-	-	-	-	-	25	-	2,475	25	200	-	-	900	-	-	-	-
31-May-04	4,200	-	-	21,250	-	-	-	-	-	-	-	25	-	900	500	200	1,025	-	1,050	-	-	1,125	-
30-Jun-04	1,800	-	-	16,375	-	-	-	-	-	1,275	-	25	-	-	-	-	-	-	-	-	-	750	-
31-Jul-04	125	-	-	14,675	-	-	-	-	-	50	-	-	-	-	-	-	-	-	-	-	-	-	-
31-Aug-04	125	-	-	12,250	-	-	-	250	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
30-Sep-04	125	-	-	20,125	-	-	-	7,500	-	2,050	-	-	-	-	-	-	-	-	125	-	-	-	-
31-Oct-04	125	-	-	11,950	-	-	-	1,700	850	-	-	-	-	-	-	-	-	-	-	-	-	-	-
30-Nov-04	-	-	-	11,900	-	-	-	4,650	175	-	-	-	-	-	-	-	-	-	-	-	-	-	-
31-Dec-04	-	-	-	7,675	-	-	-	300	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
31-Jan-05	-	-	-	7,400	-	-	-	1,000	-	-	-	-	-	-	-	400	-	-	-	-	-	-	-
28-Feb-05	-	-	-	4,375	-	-	-	150	-	50	-	-	-	-	-	2,200	-	-	-	-	-	-	-
31-Mar-05	-	-	-	3,600	-	300	-	550	-	-	-	-	-	1,925	-	675	-	-	-	-	625	-	-
30-Apr-05	-	-	-	1,625	-	-	-	-	-	-	-	-	-	2,525	150	50	3,700	-	625	-	-	-	-
31-May-05	-	-	-	5,975	-	-	-	-	-	-	-	-	-	250	-	2,400	825	-	575	-	-	-	-
30-Jun-05	1,075	-	-	2,500	-	-	-	-	-	-	-	-	-	-	-	3,325	-	-	75	-	-	-	-
31-Jul-05	300	-	-	125	-	-	-	-	-	-	-	-	-	400	-	100	-	-	-	-	-	-	-
31-Aug-05	850	-	-	25	-	-	-	-	-	-	-	-	-	-	-	4,325	-	-	125	-	25	-	-
30-Sep-05	-	-	-	25	-	-	-	-	-	-	-	-	-	1,650	25	4,150	-	-	-	-	9,875	-	-
31-Oct-05	-	-	-	400	-	-	-	800	-	-	-	-	-	-	-	1,700	2,025	-	600	-	250	-	-
30-Nov-05	-	-	-	25	-	-	-	2,300	2,225	-	-	-	-	-	-	450	-	-	3,450	-	-	-	-
31-Dec-05	-	-	-	25	-	-	-	775	4,075	-	-	-	-	-	-	75	-	-	625	-	-	-	-
31-Jan-06	-	-	-	25	-	-	-	1,050	50	4,400	-	-	1,350	-	-	1,275	-	-	700	-	425	-	-
28-Feb-06	-	-	-	-	-	-	-	375	600	-	-	-	-	325	-	-	-	-	375	-	325	-	1,000
31-Mar-06	-	-	-	500	-	-	-	7,975	1,925	-	-	-	-	-	-	-	-	-	-	-	-	-	-
30-Apr-06	850	-	-	-	-	100	-	450	4,800	3,475	-	-	-	-	-	-	-	-	-	-	-	-	-
31-May-06	-	-	-	-	-	-	-	200	11,650	4,800	-	-	-	800	-	2,625	-	-	-	-	-	-	-
30-Jun-06	-	-	-	225	-	-	-	75	5,075	500	-	-	-	-	-	550	-	-	-	-	-	-	-
31-Jul-06	-	-	-	-	-	-	-	75	5,050	200	-	-	-	350	-	-	-	-	-	-	-	-	-
31-Aug-06	-	-	-	-	-	-	-	100	10,750	-	-	-	-	350	-	-	-	-	-	-	-	-	-
30-Sep-06	-	-	-	-	-	-	-	3,325	6,250	-	-	-	-	-	-	-	900	-	-	-	200	-	-
31-Oct-06	-	-	-	-	-	-	-	775	5,200	-	-	-	-	-	-	-	-	-	-	-	-	-	-
30-Nov-06	-	-	-	-	-	-	-	6,550	5,775	4,925	-	-	-	-	-	-	-	-	-	-	-	-	-
31-Dec-06	-	-	-	-	-	-	-	2,975	-	4,300	-	-	-	-	-	-	-	-	-	-	-	-	-
31-Jan-07	2,500	-	-	-	500	-	-	2,250	1,250	1,175	-	75	-	-	-	500	-	-	-	-	-	-	-
28-Feb-07	5,075	-	-	1,000	2,500	-	-	3,325	-	2,650	-	275	-	1,250	-	4,375	-	-	-	-	150	-	-
31-Mar-07	5,275	-	-	-	800	-	-	500	200	50	-	75	-	-	300	3,550	-	-	625	125	550	-	-
30-Apr-07	200	-	-	3,475	2,225	-	-	425	2,500	-	-	-	-	500	300	4,600	800	-	-	-	575	-	125
31-May-07	-	-	-	2,475	3,900	-	-	100	375	-	-	-	-	975	-	4,350	-	-	-	1,000	-	-	-
30-Jun-07	-	-	-	10,750	1,700	-	-	700	500	-	-	-	-	2,175	100	9,075	4,525	-	-	-	200	-	-
31-Jul-07	-	-	-	1,625	200	-	-	300	200	-	-	-	-	5,725	25	900	500	-	-	-	-	-	-
31-Aug-07	-	-	-	200	75	-	-	-	-	3,000	-	-	-	1,875	-	125	500	-	-	200	-	-	-
30-Sep-07	-	-	-	50	25	-	-	200	-	-	-	-	-	-	-	100	500	-	-	-	100	-	-
31-Oct-07	-	-	-	50	25	250	-	100	300	-	-	-	-	550	-	-	-	-	-	-	-	-	-
30-Nov-07	-	-	-	-	-	-	-	825	425	500	-	100	-	250	-	2,675	550	-	-	-	300	-	-
31-Dec-07	-	-	-	-	-	100	-	500	2,675	-	-	375	-	250	50	2,650	75	-	-	-	-	-	-
31-Jan-08	-	-	-	10,975	1,375	-	-	2,775	9,650	3,450	-	-	-	1,150	25	625	50	-	-	-	-	-	-
29-Feb-08	575	-	-	13,675	1,375	-	-	25	2,550	5,025	-	875	-	600	225	3,425	1,100	-	425	-	2,125	-	-
31-Mar-08	-	-	-	9,975	5,300	-	-	600	1,775	3,625	-	50	-	100	325	625	-	-	-	-	-	-	-
30-Apr-08	-	-	-	300	2,075	-	-	-	2,200	2,750	-	-	-	-	-	375	-	-	-	-	3,050	-	-
31-May-08	-	-	-	25	225	-	-	100	5,500	2,500	-	-	-	-	-	1,700	-	-	-	-	2,600	-	-
30-Jun-08	-	-	-	2,000	300	-	-	-	1,050	500	-	-	-	-	1,000	375	650	-	-	-	1,000	-	-
31-Jul-08	-	-	2,000	675	1,500	-	-	-	5,550	800	-	-	-	1,500	-	650	650	1,500	150	-	-	-	-
31-Aug-08	-	-	-	175	50	-	-	100	7,175	2,775	-	-	-	-	-	625	650	-	25	-	-	-	-
30-Sep-08	-	-	-	175	25	-	-	150	1,425	1,000	-	-	-	-	-	425	1,150	-	-	-	-	-	-
31-Oct-08	-	-	-	-	-	-	-	100	2,250	100	-	-	-	50	-	475	650	-	-	-	75	-	-
30-Nov-08	-	-	-	-	-	-	-	300	1,600	775	2,850	-	-	225	-	950	-	250	-	-	-	-	-
31-Dec-08	175	-	-	-	-	-	-	175	300	-	-	200	100	2,200	-	950	-	-	625	-	-	-	-
31-Jan-09	125	-	-	-	-	-	-	625	1,325	-	-	-	700	775	-	950	-	-	1,750	-	200	-	-
28-Feb-09	-	-	-	-	-	500	-	2,275	10,850	11,300	1,000	-	100	2,275	-	6,300	-	-	2,650	-	200	-	150
31-Mar-09	-	-	-	500	-	1,200	-	5,675	1,300	-	-	-	-	9,850	-	5,475	1,375	-	300	-	200	-	600
30-Apr-09	2,650	1,600	20,000	20,000	4,625	-	-	2,500	4,450	3,850	25	-	2,125	8,375	475	21,225	900	-	2,750	-	4,200	775	1,175
31-May-09	1,075	400	27,425	27,425	2,900	-	-	-	-	-	-	-	725	575	-	2,075	-	-	-	-	-	-	-
30-Jun-09	125	-	2,825	2,825	2,550	-	-	-	-	-	-	1,500	-	875	1,000	1,300	-	-	-	-	-	150	-
31-Jul-09	-	-	2,350	2,350	1,175	-	-	550	900	-	25	-	-	3,950	150	1,050	-	-	-	-	-	-	-
31-Aug-09	-	-	400	400	725	-	-	1,800	700	-	25	-	575	1,050	150	400	-	-	1,000	-	50	275	-
30-Sep-09	-	-	2,500	2,500	450	-	-	275	500	-	-	-	-	25	150	750	-	-	1,100	-	-	100	-
31-Oct-09	-	-	100	100	150	-	-	-	3,000	-	-	-	-	-	-	200	-	-	50	-	-	150	-
30-Nov-09	-	-	-	-	100	-	-	-	500	-	-	-	250	-	-	150	100	-	-	-	-	275	-
31-Dec-09	-	-	-	-	50	-	-	-	2,200	-	-	-	-	-	50	275	-	-	-	-	-	50	-
31-Jan-10	-	-	-	-	-	-	-	1,000	5,800	800	-	-	-	100	-	900	-	-	500	-	-	75	-
28-Feb-10	-	250	1,900	1,900	-	1,975	-	-	4,250	375	-	-	1,700	150	300	5,200	-	-	2,900	-	-	475	-
31-Mar-10	-	500	5,975	5,975	425	900	-	525	800	175	-	-	2,200	-	300	3,125	-	-	2,500	-	-	1,125	-
30-Apr-10	-	625	12,950	12,950	100	-	-	2,800	3,750	-	-	-	1,700	50	225	1,975	-	-	850	-	-	750	-
31-May-10	-	200	13,800	13,800	300	-	-	725	50	-	-	-	1,700	-	200	2,550	-	-	1,850	-	-	825	-
30-Jun-10	-	100	14,075	14,075	250	150	-	375	10,600	1,125	1,000	-	1,700	1,400	250	1,850	-	-	850	-	-	325	-
31-Jul-10	-	25	14,550	14,550	500	100	125	550	8,375	500	625	-	1,700	300	800	2,050	-	-	1,500	-	-	125	-
31-Aug-10	-	50	17,200	17,200	1,800	-	275	-	5,750	-	-	-	1,700	50	250	1,475	-	-	350	-	-	775	-
30-Sep-10	-	250	12,475	12,475	1,125	375	-	500	2,150	-	-	-	1,700	325	425	2,100	-	-	25	-	-	300	-
31-Oct-10	-	250	22,275	22,275	625	500	-	200	2,150	-	-	-	1,700	-	225	1,775	-	-	325	-	-	25	-
30-Nov-10	-	-	22,750	22,750	375	350	-	100	3,725	650	175	-	1,700	150	-	2,300	-	-	-	-	-	-	-
31-Dec-10	1,000	2,000	13,275	13,275	25	-	-	-	-	-	-	-	1,400	200	-	1,575	-	-	-	-	-	-	-
31-Jan-11	2,000	5,700	5,575	5,575	2,000	250	-	25	-	-	-	-	925	325	-	1,975	-	-	-	-	-	100	-
28-Feb-11	2,675	250	12,075	12,075	1,375	-	-	-	-	-	25	-	-	150	-	2,025	-	-	-	-	175	-	-
31-Mar-11	50	50	9,475	9,475	1,575	475	-	475	-	-	-	-	-	500	-	1,125	-	-	-	-	-	-	-
30-Apr-11	-	325	15,750	15,750	2,500	-	-	500	600	-	-	-	-	650	-	625	-	-	-	-	350	-	-
31-May-11	-	300	11,400	11,400	2,500	-	-	-	2,075	2,750	-	-	250	350	-	75	-	-	-	-	275	-	-
30-Jun-11	-	1,125	15,450	15,450	925	-	-	100	800	1,850	300	-	525	-	-	675	-	-	-	-	-	-	-
31-Jul-11	-	350	10,525	10,525	1,275	150	-	-	200	425	-	-	300	300	-	625	-	-	-	-	-	-	-
31-Aug-11	-	150	3,700	3,700	100	-	-	200	525	125	250	-	-	200	-	475	-	-	-	-	75	-	-
30-Sep-11	100	175	2,500	2,500	600	200	1,125	100	13,600	4,100	7,925	-	-	725	25	800	-	-	-	-	50	-	-
31-Oct-11	50	25	400	400	325	200	1,425	31,150	12,000	3,125	-	-	-	-	625	2,475	175	-	-	-	150	-	-
30-Nov-11	50	150	50	50	25	900	-	5,475	925	13,275	-	-	-	-	500	2,050	650	-	-	-	-	-	-
31-Dec-11	400	2,150	21,950	21,950	650	1,100	25	100	7,350	25	-	75	6,225	250	925	1,825	600	-	-	-	-	-	-
31-Jan-12	50	6,200	67,825	67,825	10,475	-	-	300	1,750	2,625	-	-	2,125	525	-	2,825	425	-	425	-	-	-	-
29-Feb-12	-	5,700	49,425	49,425	34,275	-	25	200	750	375	75	-	-	100	-	2,200	-	-	-	-	150	-	-
31-Mar-12	200	5,125	36,525	36,525	33,725	-	25	3,325	2,700	25	300	-	650	300	-	1,300	-	-	-	-	-	-	-
30-Apr-12	3,425	10,250	15,400	15,400	19,500	-	150	4,600	9,100	4,650	1,675	1,325	-	7,675	-	15,700	-	-	-	-	100	-	-
31-May-12	1,075	1,025	14,300	14,300	1,475	-	-	25	-	900	-	-	100	950	100	1,625	-	-	-	-	-	-	-
30-Jun-12	25	575	18,425	18,425	6,225	-	-	425	200	25	-	-	150	-	-	1,675	-	-	-	-	75	-	-
31-Jul-12	4,275	2,875	6,675	4,450	7,850	45,525	-	-	11,150	17,350	-	125	225	-	-	1,125	-	-	-	-	75	-	-

LME total warranted copper by location

Metric tonnes

Source: LME

Date	Baltimore	Chicago	Mobile	New Orleans	St Louis	Johor	Port Klang	Singapore	Busan	Gwanyang	Incheon	Antwerp	Hamburg	Leghorn	Trieste	Rotterdam	Vlissingen	Barcelona	Bilbao	Helsinki	Hull	Liverpool	Dubai
31-Jan-01	29,200	-	-	123,100	-	-	-	30,575	-	-	-	1,325	19,600	6,525	-	16,825	-	11,600	34,525	2,425	25	1,775	-
28-Feb-01	27,175	-	-	117,725	-	-	-	35,875	-	-	-	850	10,150	6,325	-	12,225	-	9,825	34,525	2,175	25	300	-
31-Mar-01	29,450	-	-	139,275	-	-	-	46,125	-	-	-	25	2,850	8,525	-	22,575	-	9,375	34,525	14,050	25	50	-
30-Apr-01	46,225	-	-	153,550	-	-	-	44,175	-	-	-	525	11,600	11,325	-	15,450	-	6,775	32,200	13,925	25	2,725	-
31-May-01	48,075	-	-	159,200	-	-	-	45,175	-	-	-	525	5,100	10,800	-	11,550	1,400	3,175	26,725	13,450	25	4,225	-
30-Jun-01	55,575	-	-	169,400	-	-	-	41,200	-	-	-	525	900	9,725	-	9,900	1,400	2,700	27,775	12,875	-	3,675	-
31-Jul-01	83,850	-	-	208,975	-	-	-	55,025	-	-	-	2,525	14,875	33,175	-	18,550	7,600	2,300	28,450	22,050	-	2,575	-
31-Aug-01	84,325	-	-	232,725	-	-	-	41,100	-	-	-	2,025	14,900	29,250	200	10,725	7,600	1,500	34,775	28,725	-	2,125	-
30-Sep-01	158,375	-	-	234,300	2,900	-	-	28,375	-	-	-	2,025	15,050	28,000	200	15,650	7,600	9,000	34,775	28,725	-	2,375	-
31-Oct-01	166,225	-	-	239,725	3,650	-	-	19,600	-	-	-	2,025	11,450	21,975	200	15,725	7,600	8,975	35,675	23,650	-	3,775	-
30-Nov-01	174,025	-	-	252,600	3,650	-	-	20,875	-	-	-	1,775	9,050	15,975	150	14,925	17,650	8,975	37,000	23,650	-	5,750	-
31-Dec-01	198,475	-	-	261,575	3,650	-	-	20,525	-	-	-	2,150	10,025	16,000	50	24,600	18,375	8,975	37,250	23,650	-	8,125	-
31-Jan-02	201,325	-	-	294,650	3,650	-	-	23,175	-	-	-	4,150	8,125	16,150	75	24,425	27,900	8,975	41,325	23,650	-	10,675	-
28-Feb-02	206,425	-	-	319,075	3,650	-	-	28,450	-	-	-	3,625	7,200	13,850	75	28,550	34,350	11,875	42,175	23,650	4,025	11,200	-
31-Mar-02	216,900	-	-	327,800	3,650	-	-	26,850	-	-	-	4,400	6,900	11,475	25	28,550	39,675	25,475	51,025	23,650	4,025	12,575	-
30-Apr-02	218,875	-	-	335,550	3,650	-	-	28,950	-	-	-	3,350	6,100	11,300	25	27,100	35,250	31,900	62,150	23,650	4,025	14,325	5,000
31-May-02	213,300	-	-	332,550	3,650	-	-	23,725	-	-	-	2,250	5,550	6,625	25	26,575	33,325	21,950	63,175	23,650	4,025	15,525	28,850
30-Jun-02	213,575	-	-	298,825	3,650	-	-	17,200	-	-	-	2,250	4,500	6,450	-	24,975	22,725	14,800	63,575	22,525	9,025	16,500	30,250
31-Jul-02	204,075	-	-	308,475	3,300	-	-	13,825	-	-	-	2,250	3,800	4,250	100	24,475	21,125	12,025	64,275	22,525	9,025	18,225	42,700
31-Aug-02	190,850	-	-	314,700	2,925	-	-	12,875	-	-	-	1,975	2,875	3,225	75	23,925	31,375	11,725	66,875	21,525	8,825	20,525	51,775
30-Sep-02	178,475	-	-	322,875	2,925	-	-	6,775	-	-	-	1,450	2,775	325	75	23,675	30,500	9,525	66,375	18,075	8,825	20,525	51,775
31-Oct-02	160,150	-	-	325,975	2,925	-	-	4,550	-	-	-	1,100	2,775	175	50	23,500	33,175	8,650	67,400	16,575	8,825	19,150	61,775
30-Nov-02	152,650	-	-	334,450	2,925	-	-	5,250	-	-	-	1,100	2,775	100	-	22,150	30,875	7,050	67,700	16,075	8,825	19,450	63,375
31-Dec-02	139,175	-	-	340,250	2,925	-	-	5,400	-	-	-	1,100	2,675	-	-	22,925	31,900	9,750	67,700	16,075	8,825	19,750	60,175
31-Jan-03	117,850	-	-	333,950	1,250	-	-	8,275	-	-	-	1,100	1,975	50	-	23,175	34,975	15,725	67,700	13,075	8,825	22,625	58,700
28-Feb-03	104,100	-	-	323,650	1,250	-	-	8,150	-	-	-	1,100	1,975	-	27,275	22,975	32,800	14,725	67,200	9,800	8,825	21,750	54,250
31-Mar-03	105,350	-	-	305,625	1,250	-	-	7,075	-	-	-	1,075	1,975	-	27,275	21,950	27,100	14,725	64,800	8,400	8,750	20,225	52,800
30-Apr-03	101,725	-	-	287,775	-	-	-	2,775	-	-	-	225	1,975	-	27,275	15,475	23,700	14,725	63,600	5,350	7,600	21,725	50,500
31-May-03	98,275	-	-	280,300	-	-	-	10,675	-	-	-	175	1,825	-	27,275	13,225	22,450	13,200	54,575	2,475	10,100	41,300	40,500
30-Jun-03	78,950	-	-	271,525	-	-	-	9,225	-	-	-	175	1,425	-	29,400	8,725	20,800	11,300	44,000	1,275	8,025	43,050	26,250
31-Jul-03	62,575	-	-	266,600	-	-	-	7,925	-	-	-	175	1,150	-	29,700	1,600	24,150	6,150	43,575	1,275	6,000	44,050	10,350
31-Aug-03	69,875	-	-	271,900	-	-	-	7,775	-	-	-	175	875	-	29,825	1,175	22,475	6,150	45,325	1,275	5,500	45,025	4,175
30-Sep-03	60,300	-	-	257,950	-	-	-	7,725	-	-	-	175	275	-	20,600	1,100	21,175	6,150	45,075	1,275	4,300	43,875	4,375
31-Oct-03	57,100	-	-	236,025	-	-	-	6,425	-	-	-	175	100	-	9,650	2,150	20,150	6,150	44,575	1,275	4,150	39,475	2,875
30-Nov-03	55,975	-	-	226,225	-	-	-	4,750	-	-	-	175	-	-	500	1,650	16,550	6,125	42,575	-	4,150	34,500	2,100
31-Dec-03	64,900	-	-	218,050	-	-	-	300	-	-	-	175	-	9,475	25	975	8,325	3,700	35,925	-	3,575	32,375	400
31-Jan-04	58,475	-	-	197,575	-	-	-	-	-	-	-	175	-	5,600	25	850	1,825	2,800	26,950	-	2,500	28,275	300
29-Feb-04	45,925	-	-	177,075	-	-	-	-	-	-	-	25	-	4,175	25	450	-	-	16,400	-	150	19,475	300
31-Mar-04	18,950	-	-	142,125	-	-	-	-	-	-	-	25	-	2,475	25	200	200	-	4,375	-	150	12,250	-
30-Apr-04	5,525	-	-	114,300	-	-	-	-	-	2,000	-	25	-	2,475	1,025	200	5,550	-	3,250	-	-	10,075	-
31-May-04	4,900	-	-	101,825	-	-	-	1,500	100	3,375	-	25	-	900	500	200	2,225	-	1,525	-	-	8,650	-
30-Jun-04	1,800	-	-	86,525	-	-	-	4,300	-	3,475	-	25	-	-	-	-	50	-	475	-	-	750	-
31-Jul-04	125	-	-	74,375	-	-	-	3,575	-	2,725	-	-	-	-	-	-	-	-	475	-	-	-	-
31-Aug-04	125	-	-	61,025	-	800	-	23,225	3,025	9,050	-	-	-	-	-	-	-	-	475	-	-	-	-
30-Sep-04	125	-	-	51,650	-	1,100	-	25,500	3,025	3,100	-	-	-	-	-	-	-	-	175	50	-	-	1,600
31-Oct-04	150	-	-	36,925	-	1,200	-	23,775	5,825	2,050	-	-	-	-	-	-	-	-	50	50	-	-	1,600
30-Nov-04	25	-	-	28,575	-	1,200	-	15,250	1,100	1,875	-	-	-	-	-	1,700	-	-	50	350	-	-	800
31-Dec-04	2,400	-	-	24,150	-	1,125	-	9,275	425	1,075	-	-	-	-	-	1,275	-	-	50	650	-	-	-
31-Jan-05	4,650	-	-	21,975	-	1,125	-	4,425	125	975	-	-	-	1,750	-	1,100	-	-	50	1,050	-	-	-
28-Feb-05	4,650	-	-	20,425	-	1,025	-	3,075	125	975	-	-	2,225	3,600	400	6,350	800	-	50	1,225	-	-	-
31-Mar-05	5,250	-	-	17,525	-	325	-	575	525	750	-	-	-	3,825	400	3,150	800	-	550	1,225	625	-	-
30-Apr-05	5,250	-	-	14,875	-	-	-	-	425	650	-	-	-	2,875	400	9,800	10,325	-	3,200	-	-	-	-
31-May-05	7,125	-	-	10,500	-	-	-	-	-	100	-	-	-	250	400	7,700	3,300	-	5,025	-	-	-	-
30-Jun-05	6,750	-	-	6,525	-	-	-	-	1,250	100	-	-	-	200	-	3,675	75	-	1,625	-	-	-	-
31-Jul-05	5,500	-	-	3,500	-	500	-	300	650	-	-	-	-	400	-	4,400	225	-	2,425	-	3,700	-	-
31-Aug-05	1,900	-	-	900	-	200	-	3,550	4,875	-	-	-	-	1,125	875	18,100	3,600	-	4,850	-	16,400	-	-
30-Sep-05	-	-	-	900	-	300	-	8,025	10,875	14,900	-	-	1,900	1,650	225	15,300	3,500	-	4,975	-	11,400	-	-
31-Oct-05	-	-	-	400	-	300	-	13,500	16,375	16,700	-	-	100	-	-	1,700	2,325	-	5,550	-	300	-	-
30-Nov-05	-	-	-	25	-	100	-	12,575	34,000	16,700	-	-	-	-	-	450	-	-	3,525	-	-	-	-
31-Dec-05	-	-	-	25	-	100	-	13,075	48,000	19,800	-	-	-	-	-	3,675	-	-	2,450	-	-	-	1,675
31-Jan-06	-	-	-	25	-	100	-	7,925	58,750	17,850	-	-	2,100	-	-	2,550	-	-	3,250	-	1,325	-	3,725
28-Feb-06	-	-	-	-	-	100	-	11,425	69,750	22,775	-	-	-	325	-	-	-	-	475	-	325	-	3,725
31-Mar-06	1,025	-	-	850	-	100	-	15,575	81,175	23,175	-	-	-	-	-	-	-	-	25	-	-	-	-
30-Apr-06	850	-	-	350	-	100	-	8,050	85,625	22,725	-	-	-	-	-	-	-	-	25	-	-	-	-
31-May-06	-	-	-	350	-	-	-	19,475	70,000	15,950	-	-	-	1,300	-	5,075	-	-	25	-	-	-	-
30-Jun-06	-	-	-	225	-	-	-	18,950	52,300	21,525	-	-	-	-	-	550	-	-	25	-	-	-	-
31-Jul-06	-	-	-	-	-	-	-	22,250	50,775	24,050	-	-	-	350	-	-	-	-	25	-	-	-	-
31-Aug-06	-	-	-	-	-	-	-	43,775	53,050	25,050	-	-	-	350	-	-	-	-	25	-	3,100	-	-
30-Sep-06	-	-	-	800	-	-	-	47,825	38,225	25,650	-	-	-	-	-	-	900	-	25	-	3,100	-	50
31-Oct-06	1,000	-	-	5,650	2,050	-	-	52,650	32,575	26,250	-	-	-	-	2,000	2,000	-	-	25	-	1,650	-	150
30-Nov-06	7,475	-	-	19,400	4,100	-	-	48,900	28,025	32,100	-	-	-	1,200	2,000	5,975	-	-	25	-	1,500	-	150
31-Dec-06	17,650	-	-	40,025	9,175	-	-	32,650	22,850	27,625	-	-	-	2,200	2,000	14,500	-	-	725	3,350	5,400	-	150
31-Jan-07	17,875	-	-	50,500	19,575	-	-	16,175	5,950	11,700	-	3,725	-	13,350	2,000	46,750	10,150	-	925	2,350	6,150	-	150
28-Feb-07	12,775	-	-	51,075	28,000	-	-	10,700	2,800	9,700	-	1,775	-	16,750	2,000	46,875	10,150	-	2,075	2,500	7,500	-	150
31-Mar-07	5,300	-	-	47,050	31,450	-	-	6,425	2,000	3,400	-	1,000	-	14,350	1,900	43,600	10,150	-	1,500	2,500	5,775	-	150
30-Apr-07	225	-	-	43,425	26,150	-	-	6,800	5,200	3,700	-	675	-	15,825	1,950	35,400	9,000	-	650	2,375	4,150	-	150
31-May-07	25	-	-	33,925	20,575	-	-	6,625	6,675	6,450	-	675	-	16,500	1,850	20,550	7,700	-	650	2,250	2,925	-	25
30-Jun-07	25	-	-	25,450	14,200	-	-	6,975	11,150	13,675	-	675	-	14,800	1,825	15,600	4,525	-	650	1,150	2,450	-	25
31-Jul-07	25	-	-	15,125	11,900	-	-	9,500	20,750	18,625	-	675	-	11,575	1,650	5,075	500	-	1,500	1,050	2,250	-	25
31-Aug-07	275	-	-	17,150	11,675	-	-	15,150	33,375	37,800	-	675	-	7,975	2,475	6,025	500	-	2,350	200	2,250	-	25
30-Sep-07	275	-	-	18,600	10,125	475	-	10,925	34,675	34,575	-	675	-	5,675	2,975	6,775	500	-	2,350	-	2,150	-	25
31-Oct-07	275	-	-	23,175	13,700	975	-	15,925	41,425	34,575	-	675	-	8,600	4,225	14,300	4,450	-	2,600	-	2,050	-	25
30-Nov-07	275	-	-	28,100	17,850	725	-	14,450	43,575	35,875	-	1,175	-	11,550	4,250	20,125	6,375	-	2,625	-	2,025	200	25
31-Dec-07	75	-	-	35,650	23,050	225	-	13,500	43,750	35,175	-	1,075	-	10,750	5,250	16,850	7,375	-	2,775	-	1,725	200	25
31-Jan-08	75	-	-	32,800	22,825	125	-	12,825	25,000	32,300	-	1,725	-	9,175	5,200	15,125	9,375	-	3,275	-	8,725	200	25
29-Feb-08	650	-	-	24,325	21,125	125	-	7,650	22,775	29,700	-	1,025	-	4,350	3,350	5,975	7,425	-	425	-	14,525	200	25
31-Mar-08	-	-	-	11,175	16,700	125	-	9,100	22,175	28,075	-	50	-	3,100	3,225	2,250	2,850	-	-	-	13,450	200	25
30-Apr-08	-	-	-	1,500	10,500	3,625	-	11,675	29,400	28,650	2,500	-	-	3,525	2,700	1,950	2,850	1,100	325	-	10,000	200	25
31-May-08	-	-	550	2,850	8,650	4,350	-	11,175	34,250	37,500	3,250	-	-	3,825	3,275	3,200	2,850	1,325	625	-	7,050	200	25
30-Jun-08	-	-	10,375	3,550	8,400	3,475	-	10,225	31,300	35,500	3,450	-	-	4,725	3,275	650	1,350	1,800	725	-	3,575	200	25
31-Jul-08	-	-	10,675	3,200	14,625	2,675	-	12,200	32,775	34,850	3,650	2,025	2,700	4,400	2,875	7,300	1,350	1,800	2,250	-	2,825	200	25
31-Aug-08	-	-	11,825	12,900	14,300	1,075	-	13,400	36,575	36,950	5,750	2,025	4,200	5,825	3,150	15,050	2,125	-	5,175	-	2,825	200	25
30-Sep-08	-	-	16,200	21,375	21,875	425	-	9,150	40,650	30,675	5,700	2,025	5,250	6,275	3,250	15,950	3,400	600	12,875	-	2,600	300	25
31-Oct-08	-	-	17,950	23,425	30,300	175	-	9,625	37,575	24,050	5,675	2,025	10,125	5,925	3,250	32,975	6,875	1,250	16,700	-	2,425	300	25
30-Nov-08	1,025	-	21,650	32,000	33,650	175	-	9,300	35,800	23,675	4,200	2,025	9,925	19,400	3,250	64,850	7,625	2,350	18,150	-	2,275	300	25
31-Dec-08	800	2,625	23,125	42,225	36,150	-	-	11,375	36,850	22,900	1,575	2,025	15,975	24,200	3,250	83,075	7,625	2,200	21,275	-	2,200	300	25
31-Jan-09	3,200	3,375	23,125	89,925	43,625	3,800	-	16,250	47,425	22,900	1,575	1,825	16,775	42,550	3,250	113,725	11,625	2,200	32,775	-	10,975	300	325
28-Feb-09	3,075	3,375	23,125	120,500	49,125	4,400	-	18,875	39,875	18,850	1,475	8,175	19,175	57,175	3,250	118,200	11,575	1,625	29,550	-	10,125	300	475
31-Mar-09	3,075	3,375	23,125	153,075	55,875	2,300	-	13,875	17,425	4,000	50	12,875	19,075	42,600	2,400	99,625	9,325	1,625	18,700	-	7,100	6,800	3,325
30-Apr-09	2,875	5,875	40,825	162,300	60,225	-	-	2,525	5,300	3,850	50	11,500	14,625	25,050	1,400	53,725	3,300	1,625	16,650	-	4,950	5,350	1,475
31-May-09	1,075	5,800	39,425	142,500	54,400	-	-	25	1,900	-	25	11,500	7,250	12,750	900	26,900	225	1,625	15,875	-	750	13,125	-
30-Jun-09	125	8,075	14,825	117,625	49,175	-	-	800	1,000	-	25	9,500	4,200	8,250	1,150	23,925	-	1,625	14,900	-	200	13,075	-
31-Jul-09	-	8,950	12,225	124,650	54,750	-	-	4,500	10,425	-	50	2,750	4,200	6,050	300	23,750	-	1,625	13,850	-	200	12,925	-
31-Aug-09	-	12,375	10,275	130,500	60,200	-	-	3,075	20,750	-	250	1,575	4,200	2,150	300	25,375	-	925	13,850	-	150	13,325	-
30-Sep-09	-	14,875	12,375	135,175	64,650	-	-	5,300	45,650	650	550	1,575	3,625	5,125	300	31,200	-	925	12,850	-	-	12,825	500
31-Oct-09	-	18,500	9,975	135,150	68,700	-	-	9,950	54,650	850	2,500	2,325	7,275	3,950	250	33,200	-	425	11,750	-	-	12,350	500
30-Nov-09	-	22,275	9,875	148,850	74,800	-	-	16,950	78,675	850	4,975	2,325	12,525	4,100	200	36,050	450	425	13,200	-	-	11,500	500
31-Dec-09	-	25,550	9,875	168,675	79,300	3,575	-	25,350	98,600	5,525	6,775	2,325	12,025	4,725	400	35,000	-	-	13,200	-	-	10,925	500
31-Jan-10	-	26,675	9,875	200,175	78,750	7,275	1,000	26,600	97,325	3,625	5,975	2,325	12,025	7,525	1,100	36,725	-	-	12,700	-	-	10,875	500
28-Feb-10	-	28,525	14,125	212,050	80,875	6,325	1,000	24,775	83,950	1,600	4,700	2,325	11,525	7,075	1,450	45,225	-	-	15,700	-	-	9,900	500
31-Mar-10	-	30,150	17,350	208,575	81,450	4,125	1,000	19,775	76,950	2,400	5,250	750	11,025	6,375	1,600	30,425	-	-	15,300	-	-	7,300	500
30-Apr-10	-	32,300	23,625	201,125	84,050	4,125	1,000	16,350	74,200	3,225	5,650	750	10,525	6,225	1,175	29,400	-	-	12,775	-	-	4,600	500
31-May-10	-	31,875	23,975	189,075	85,200	3,925	1,000	12,075	71,225	3,225	5,650	750	10,525	6,325	1,050	28,150	-	-	12,775	-	-	3,225	-
30-Jun-10	-	31,525	23,150	179,875	85,275	3,625	1,000	8,950	66,825	3,225	4,350	750	10,525	5,525	1,250	26,575	-	-	10,700	-	-	1,525	-
31-Jul-10	-	32,450	19,875	169,200	87,825	3,275	700	9,650	48,000	1,925	4,200	750	10,525	5,075	1,150	23,925	-	-	8,050	-	-	625	-
31-Aug-10	-	32,425	21,625	163,050	90,575	4,175	575	10,075	41,175	725	3,975	750	10,525	4,500	600	22,425	-	-	6,900	-	-	1,075	-
30-Sep-10	-	32,000	16,900	149,625	91,900	4,175	-	10,225	37,700	1,225	4,375	750	10,525	4,175	550	17,750	-	-	4,150	-	-	600	-
31-Oct-10	-	37,075	26,700	135,625	95,100	3,875	-	10,150	37,700	1,725	4,875	750	10,525	4,150	225	19,075	-	-	2,925	-	-	300	-
30-Nov-10	-	37,575	27,175	126,950	95,825	2,825	-	10,975	37,100	1,800	4,600	750	10,525	3,550	-	16,550	-	-	2,025	-	-	275	-
31-Dec-10	5,425	38,425	19,700	131,900	102,275	1,900	25	11,175	40,800	3,700	5,025	750	10,025	3,575	-	14,325	-	-	1,525	-	-	275	-
31-Jan-11	4,675	35,125	12,000	130,625	101,350	1,750	25	14,425	57,225	3,900	5,675	750	8,875	3,500	-	18,000	-	-	1,525	-	-	175	-
28-Feb-11	3,350	34,025	18,500	129,150	99,950	1,500	25	20,475	62,700	21,475	10,950	750	7,750	3,175	-	17,525	-	-	1,525	-	175	75	-
31-Mar-11	725	33,925	15,900	118,950	100,325	975	1,025	32,250	63,650	39,300	12,125	750	7,750	3,725	-	16,350	-	-	1,525	-	-	75	-
30-Apr-11	675	33,600	21,975	115,500	99,375	1,000	2,275	34,675	70,675	55,725	12,625	750	8,250	5,825	500	13,825	-	-	1,525	-	350	75	-
31-May-11	675	33,125	17,500	114,025	97,125	1,000	6,050	42,225	68,150	55,775	12,825	750	8,450	5,525	500	13,125	-	-	1,525	-	625	75	-
30-Jun-11	675	26,075	20,700	117,700	97,525	4,500	7,025	45,100	65,125	46,350	13,425	750	8,425	6,250	500	18,000	-	-	1,525	-	125	75	-
31-Jul-11	675	33,325	15,325	120,875	99,100	3,800	8,325	44,450	62,525	41,750	13,525	750	7,200	5,750	500	15,475	-	-	1,525	-	1,650	75	-
31-Aug-11	675	35,600	7,575	116,025	98,250	3,650	6,300	43,700	60,725	41,200	12,750	425	7,900	5,950	575	23,575	-	-	1,525	-	1,050	75	-
30-Sep-11	675	38,700	6,375	118,075	98,850	3,650	6,300	41,400	62,850	36,275	10,575	425	7,800	6,250	1,075	29,725	5,225	-	1,525	-	375	75	-
31-Oct-11	625	40,500	3,775	122,275	99,200	3,650	1,600	43,300	33,725	22,275	1,675	425	7,800	6,775	2,175	32,450	5,625	-	1,525	-	325	75	-
30-Nov-11	625	44,350	3,325	123,450	99,375	3,025	175	16,425	21,175	19,675	1,275	425	7,800	5,825	4,525	30,675	3,375	-	1,025	-	-	75	-
31-Dec-11	625	48,675	24,775	128,375	104,350	2,125	175	9,850	17,675	6,250	1,075	425	7,800	6,475	1,425	29,525	1,725	-	1,025	-	-	75	-
31-Jan-12	275	46,275	68,600	111,350	105,900	725	150	9,750	10,225	4,600	1,075	250	3,200	6,775	25	25,525	1,250	-	1,025	-	-	75	-
29-Feb-12	225	40,275	49,850	93,750	98,925	725	150	10,250	8,800	1,850	1,075	175	1,075	11,400	25	24,650	1,675	-	100	-	150	75	-
31-Mar-12	1,225	30,950	36,625	79,950	83,925	725	150	11,000	10,775	800	1,500	675	1,075	8,050	25	23,475	1,675	-	25	-	-	75	-
30-Apr-12	8,450	27,650	15,500	62,675	73,200	725	225	9,900	16,250	9,950	2,200	1,825	425	8,175	25	23,950	2,175	-	25	-	350	75	-
31-May-12	6,075	17,650	14,400	55,075	65,525	1,425	75	10,550	38,150	17,500	925	125	425	1,450	125	12,750	2,650	-	25	-	-	75	-
30-Jun-12	4,850	15,825	18,525	48,900	62,175	10,325	75	16,000	50,250	33,575	925	125	325	1,000	25	7,625	4,650	-	25	-	300	75	-
31-Jul-12	4,275	14,750	6,775	39,750	63,200	57,775	75	15,850	46,750	35,375	925	125	225	1,500	25	3,650	10,150	-	25	-	625	-	-

Gold production and use statistics

Units: metric tonnes
Source: GFMS

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Total mine production	2,625	2,631	2,504	2,561	2,495	2,497	2,429	2,611	2,741	2,818
Central bank sales	547	620	479	663	365	484	235	34	0	0
Scrap	874	991	881	902	1,133	1,005	1,350	1,735	1,719	1,661
Net producer hedging	0	0	0	0	0	0	0	0	0	6
Total supply	**4,045**	**4,241**	**3,864**	**4,127**	**3,993**	**3,985**	**4,014**	**4,379**	**4,459**	**4,486**
Demand sources										
Jewelry	2,662	2,484	2,616	2,719	2,300	2,423	2,304	1,814	2,017	1,973
Other fabrication	481	519	564	586	658	680	723	703	767	786
Central bank purchases	0	0	0	0	0	0	0	0	77	455
Bar investment	232	177	215	251	233	240	621	498	882	1,209
Net producer de-hedging	379	289	438	92	434	432	357	234	108	0
Implied other investment	291	772	31	478	368	210	9	1,131	608	62
Total demand	**4,045**	**4,241**	**3,864**	**4,127**	**3,993**	**3,985**	**4,014**	**4,379**	**4,459**	**4,485**
Demand sources (% of total demand)										
Jewelry	66%	59%	68%	66%	58%	61%	57%	41%	45%	44%
Other fabrication	12%	12%	15%	14%	16%	17%	18%	16%	17%	18%
Central bank purchases	0%	0%	0%	0%	0%	0%	0%	0%	2%	10%
Bar investment	6%	4%	6%	6%	6%	6%	15%	11%	20%	27%
Net producer de-hedging	9%	7%	11%	2%	11%	11%	9%	5%	2%	0%
Implied other investment	7%	18%	1%	12%	9%	5%	0%	26%	14%	1%
Total	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**
Above ground stock	**148,015**	**150,645**	**153,149**	**155,710**	**158,205**	**160,702**	**163,131**	**165,741**	**168,482**	**171,300**

Silver production and use statistics

Units: metric tonnes
Source: GFMS

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Total mine production	18,491	18,575	19,085	19,800	19,940	20,712	21,262	22,273	23,371	23,688
Government sales	1,841	2,759	1,925	2,050	2,442	1,322	949	485	1,375	358
Old scrap	6,137	6,096	6,140	6,270	6,407	6,314	6,249	6,221	7,113	7,984
Hedging	0	0	299	858	0	0	0	0	1,568	333
Disinvestment	541	0	0	0	0	0	0	0	0	0
Total supply	**27,010**	**27,430**	**27,449**	**28,979**	**28,789**	**28,347**	**28,459**	**28,979**	**33,427**	**32,363**
Demand sources										
Industrial	11,051	11,458	12,049	13,430	14,127	15,275	15,325	12,600	15,552	15,132
Photography	6,354	6,000	5,561	4,986	4,423	3,658	3,151	2,466	2,243	2,056
Jewelry	5,253	5,574	5,437	5,406	5,172	5,085	4,936	4,970	5,207	4,970
Silverware	2,597	2,610	2,090	2,103	1,904	1,823	1,785	1,838	1,592	1,431
Coins and medals	983	1,110	1,319	1,244	1,238	1,235	2,031	2,451	3,092	3,676
Government purchases	0	0	0	0	0	0	0	0	0	0
Producer de-hedging	771	650	0	0	212	753	264	541	0	0
Implied net investment	0	28	989	1,807	1,714	516	970	4,112	5,742	5,101
Total demand	**27,010**	**27,430**	**27,445**	**28,976**	**28,789**	**28,344**	**28,463**	**28,979**	**33,427**	**32,366**
Demand sources (% of total demand)										
Industrial	41%	42%	44%	46%	49%	54%	54%	43%	47%	47%
Photography	24%	22%	20%	17%	15%	13%	11%	9%	7%	6%
Jewelry	19%	20%	20%	19%	18%	18%	17%	17%	16%	15%
Silverware	10%	10%	8%	7%	7%	6%	6%	6%	5%	4%
Coins and medals	4%	4%	5%	4%	4%	4%	7%	8%	9%	11%
Government purchases	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Producer de-hedging	3%	2%	0%	0%	1%	3%	1%	2%	0%	0%
Implied net investment	0%	0%	4%	6%	6%	2%	3%	14%	17%	16%
Total demand	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**
Identifiable bullion stocks	**30,323**	**27,222**	**26,040**	**22,441**	**27,203**	**29,399**	**27,421**	**35,934**	**36,036**	**35,925**

Platinum production and use statistics

Units: Thousand ounces
Source: GFMS

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Total mine production	5,788	6,026	6,413	6,624	7,024	6,584	6,156	6,049	6,186	6,401
Autocatalyst scrap	700	736	770	802	836	921	998	780	898	978
Old jewelry scrap	123	168	230	340	349	541	906	447	529	589
Total Supply	**6,611**	**6,930**	**7,413**	**7,766**	**8,209**	**8,046**	**8,060**	**7,276**	**7,613**	**7,968**
Demand sources										
Autocatalyst	2,916	3,132	3,487	3,706	3,865	4,014	3,509	2,517	2,895	3,023
Jewelry	3,076	2,836	2,400	2,132	2,023	1,862	1,639	2,314	1,908	2,167
Chemical	321	302	355	342	316	363	326	283	491	461
Electronics	320	335	345	366	404	407	285	253	256	232
Glass	235	315	528	487	418	483	487	92	474	411
Petroleum	135	136	180	140	189	174	217	187	197	136
Other industrial	518	527	445	453	489	499	459	396	468	501
Retail investment	79	19	49	22	-22	23	452	305	85	300
Total demand	**7,600**	**7,602**	**7,789**	**7,648**	**7,682**	**7,825**	**7,374**	**6,347**	**6,774**	**7,231**
Demand sources (% of total demand)										
Autocatalyst	38%	41%	45%	48%	50%	51%	48%	40%	43%	42%
Jewelry	41%	37%	31%	28%	26%	24%	22%	36%	28%	30%
Chemical	4%	4%	5%	4%	4%	5%	4%	4%	7%	6%
Electronics	4%	4%	4%	5%	5%	5%	4%	4%	4%	3%
Glass	3%	4%	7%	6%	5%	6%	7%	1%	7%	6%
Petroleum	2%	2%	2%	2%	2%	2%	3%	3%	3%	2%
Other industrial	7%	7%	6%	6%	6%	6%	6%	6%	7%	7%
Retail investment	1%	0%	1%	0%	0%	0%	6%	5%	1%	4%
Total	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**
Above ground stocks	**1,503**	**830**	**455**	**573**	**1,101**	**1,322**	**2,006**	**2,935**	**3,775**	**4,510**

Palladium production and use statistics

Units: Thousand ounces
Source: GFMS

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Total mine production	5,952	6,172	6,630	6,953	7,355	7,050	6,381	6,322	6,612	6,837
Autocatalyst scrap	339	402	486	626	744	951	1,184	1,067	1,291	1,449
Old jewelry scrap	33	39	74	103	234	185	192	116	179	218
Total supply	**6,324**	**6,613**	**7,190**	**7,682**	**8,333**	**8,186**	**7,757**	**7,505**	**8,082**	**8,504**
Demand sources										
Autocatalysts	4,479	4,203	4,013	3,990	4,427	4,784	4,479	4,020	5,254	5,529
Jewelry	314	386	1,022	1,363	1,281	1,281	1,295	1,110	798	675
Dental	673	696	721	598	591	645	659	659	658	657
Chemical	233	245	283	313	399	378	347	307	348	342
Electronics	765	1,015	1,066	1,121	1,219	1,275	1,347	1,240	1,145	1,464
Other industrial	95	95	90	95	95	95	91	76	86	93
Retail investment	21	57	127	255	135	45	94	170	80	56
Total demand	**6,580**	**6,697**	**7,322**	**7,735**	**8,146**	**8,503**	**8,312**	**7,582**	**8,369**	**8,816**
Demand sources (% of total demand)										
Autocatalysts	68%	63%	55%	52%	54%	56%	54%	53%	63%	63%
Jewelry	5%	6%	14%	18%	16%	15%	16%	15%	10%	8%
Dental	10%	10%	10%	8%	7%	8%	8%	9%	8%	7%
Chemical	4%	4%	4%	4%	5%	4%	4%	4%	4%	4%
Electronics	12%	15%	15%	14%	15%	15%	16%	16%	14%	17%
Other industrial	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Retail investment	0%	1%	2%	3%	2%	1%	1%	2%	1%	1%
Total	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**
Above ground stock	**13,152**	**13,067**	**12,935**	**12,882**	**13,069**	**12,752**	**12,196**	**12,120**	**11,533**	**11,220**

Supply and demand growth of labor

Percent CAGR 2005-2015
Source: Xstrata, Mineral Council of Australia, McKinsey

	Demand	Supply
Managers/admin	5.4	2.3
Professionals	5.9	1.9
Technicians	6.5	2.5
Trade	5.7	0.8
Semi-skilled	5.7	0.2
Laborers	6.1	-0.2

Global tire supply and demand

Thousands of 40" to 63" units
Source: Xstrata, McKinsey

	Demand	Supply
2006	98	97
2007	105	100
2008	117	105
2009	120	119
2010	127	123
2011	135	125
2012E	143	140
2013F	155	143
2014F	165	148
2015F	175	150
2016F	185	165

Assets held by physical gold ETPs
US$ millions
Source: ETP providers

	DB PHYSICAL GOLD	ETFS PHYSICAL GOLD	GOLD BULLION SECURITIES LTD	ISHARES GOLD TRUST	RBS PHYSICAL GOLD	SOURCE PHYSICAL GOLD P-ETC	SPDR GOLD TRUST	SPROTT PHYSICAL GOLD TRUST	UBS GOLD ETF	ZKB GOLD ETF	OTHER (n=15)
1/31/2004		105.14									
2/29/2004		103.71									
3/31/2004		111.00									
4/30/2004		100.60									
5/31/2004		102.62									
6/30/2004		104.09									
7/31/2004		102.18									
8/31/2004		106.59									
9/30/2004		109.28									
10/31/2004		110.91									
11/30/2004		116.82					1,502.50				
12/31/2004		115.41					1,335.90				
1/31/2005		111.24		14.79			2,064.56				
2/28/2005		113.99	715.06	658.51			2,210.82				
3/31/2005		111.37	701.93	300.16			2,260.90				
4/30/2005		113.28	712.44	173.72			2,496.96				
5/31/2005		108.61	680.09	166.76			2,403.21				
6/30/2005		114.02	715.56	173.84			2,454.36				
7/31/2005		111.23	702.59	190.86			2,590.61				
8/31/2005		113.50	708.99	193.26			2,721.18				
9/30/2005		124.17	768.92	238.68			3,124.23				
10/31/2005		123.48	761.04	278.82			3,164.48				
11/30/2005		129.23	809.48	309.58			3,633.40				
12/31/2005		134.65	840.67	369.86			4,384.30				
1/31/2006		149.86	931.64	522.47			6,112.26				
2/28/2006		145.45	913.25	624.96			6,212.56				
3/31/2006		153.25	953.97	666.73			6,530.44				
4/30/2006		168.01	1,063.65	821.27			7,543.93				
5/31/2006		167.27	1,046.90	841.02			7,302.95				
6/30/2006		157.43	999.45	814.36			7,365.97				
7/31/2006		166.70	1,031.30	860.34			7,863.42				
8/31/2006		161.14	1,016.20	869.36			7,904.60				
9/30/2006		157.17	970.06	830.30			7,439.70				
10/31/2006		157.94	984.34	826.79			7,584.22				
11/30/2006		166.68	1,048.87	885.78			9,214.21				
12/31/2006		165.46	1,032.78	910.80			9,285.55				
1/31/2007		168.58	1,062.01	917.63			9,530.01				
2/28/2007		175.38	1,085.16	954.85			10,377.53				
3/31/2007		172.97	1,082.37	954.54			10,321.18				22.35
4/30/2007		178.02	1,104.20	974.40			10,741.11				53.94
5/31/2007		172.64	1,071.86	977.29			9,962.08				52.42
6/30/2007		168.96	1,054.45	959.71			9,691.92				51.57
7/31/2007		173.56	1,079.25	995.24			10,611.93				52.47
8/31/2007		173.45	1,089.26	1,022.86			11,142.10				52.67
9/30/2007		193.25	1,205.51	1,196.49			13,812.53				57.54
10/31/2007		204.65	1,277.92	1,336.20			15,275.87				60.87
11/30/2007		206.97	1,269.06	1,363.82			15,131.52				99.22
12/31/2007		219.56	1,352.14	1,479.98			16,846.58				103.32
1/31/2008		242.30	1,495.15	1,756.80			18,800.98				113.95
2/29/2008		250.00	1,575.44	1,879.02			20,024.68				119.81
3/31/2008		237.17	1,504.51	1,890.47			18,904.73				115.62
4/30/2008		225.78	1,401.56	1,768.72			16,385.52				109.27
5/31/2008		226.13	1,433.09	1,745.03			17,035.26				110.40
6/30/2008		236.45	1,484.15	1,820.04			19,194.00				116.26
7/31/2008		233.95	1,480.70	1,797.89			19,781.57				114.39
8/31/2008		212.36	1,346.72	1,590.22			17,363.38				104.09
9/30/2008		355.47	1,428.32	1,769.23			20,969.76				105.23
10/31/2008		1,347.68	1,166.27	1,506.76			17,449.76				123.66
11/30/2008		1,564.94	1,303.37	1,715.26			19,884.76				168.77
12/31/2008		1,951.00	1,391.71	1,889.19			22,053.95			2,768.21	215.96
1/31/2009		2,387.30	1,485.96	2,051.03			25,174.17			3,278.80	253.01
2/28/2009		2,591.05	4,021.54	2,052.42			31,170.00			3,821.82	292.23
3/31/2009		2,722.18	3,975.34	2,002.14			33,286.24			4,015.41	338.10
4/30/2009		2,761.59	3,808.76	1,952.05			31,530.65			4,032.86	353.18
5/31/2009		3,063.20	4,234.50	2,200.00			35,218.82			4,465.17	445.82
6/30/2009		2,963.16	4,014.80	2,112.44		0.56	33,444.82			4,342.25	774.94
7/31/2009		2,917.82	3,974.43	2,211.27		1.98	32,793.85			4,507.97	839.71
8/31/2009		3,654.20	3,934.36	2,247.47		4.87	32,484.52			4,561.99	912.42
9/30/2009		4,193.00	4,254.89	2,418.84		12.93	35,477.26			4,860.18	978.47
10/31/2009		3,998.93	4,405.44	2,684.82		68.84	37,085.10			5,005.94	1,040.75
11/30/2009		4,617.40	4,887.46	3,101.83		220.79	42,844.62			5,660.22	1,478.30
12/31/2009		4,462.83	4,406.00	2,791.62		208.52	39,897.86		8.32	5,119.20	1,395.20
1/31/2010		4,236.00	4,260.69	2,756.52		164.40	38,654.21		34.17	5,100.48	1,392.81
2/28/2010		4,609.93	4,283.36	2,752.92		235.39	39,755.92	383.60	54.84	5,371.17	1,376.50
3/31/2010		4,508.63	4,168.72	2,753.01		262.36	40,409.55	437.63	102.11	5,600.12	1,145.92
4/30/2010		5,078.12	4,349.92	2,977.84	13.67	324.36	43,906.02	493.83	150.47	5,966.88	1,203.50
5/31/2010		5,992.90	4,711.09	3,287.31	32.53	392.86	49,513.94	796.61	213.37	6,483.99	1,305.93
6/30/2010	10.56	6,510.74	4,951.74	3,432.55	33.09	459.99	52,796.95	811.12	296.35	6,879.01	1,343.93
7/31/2010	33.19	6,045.69	4,634.47	3,451.24	43.62	435.55	48,679.04	761.37	350.40	6,649.41	1,334.46
8/31/2010	338.91	6,546.59	5,093.24	3,830.36	46.14	468.72	52,286.86	829.08	505.20	7,208.84	1,399.55
9/30/2010	450.14	7,042.52	5,251.32	4,195.20	48.20	532.37	54,898.97	1,112.52	674.10	7,717.75	1,506.87
10/31/2010	517.89	7,426.96	5,393.20	4,482.00	49.98	627.70	56,429.81	1,154.26	705.26	7,945.73	1,543.87
11/30/2010	587.42	7,758.36	5,425.69	4,788.04	51.42	834.41	57,350.37	1,188.86	720.48	8,202.44	1,632.53
12/31/2010	659.15	7,969.84	5,596.56	5,378.61	52.22	927.90	58,498.23	1,198.08	803.98	8,508.70	1,738.36
1/31/2011	587.25	7,205.44	4,998.84	4,744.10	49.24	839.59	52,493.46	1,139.85	784.69	8,073.40	1,478.94
2/28/2011	681.59	7,618.68	5,310.96	5,377.41	52.25	947.76	54,926.74	1,206.33	978.10	8,512.86	2,180.89
3/31/2011	838.93	7,866.00	5,319.68	5,779.04	53.19	1,001.27	55,832.11	1,226.71	1,045.40	8,817.10	2,362.19
4/30/2011	1,146.18	8,586.47	5,705.69	6,776.11	56.98	1,105.88	61,770.80	1,715.94	1,189.49	9,716.00	2,800.69
5/31/2011	1,053.57	8,439.25	5,601.74	6,816.22	56.82	1,179.64	59,751.25	1,658.87	1,181.40	9,673.53	2,846.77
6/30/2011	1,151.43	8,435.86	5,473.22	6,966.13	55.45	1,169.66	58,196.00	1,619.17	1,210.71	9,547.90	2,872.58
7/31/2011	1,542.77	9,547.05	5,966.09	8,204.63	59.75	1,468.77	66,006.93	2,001.61	1,377.49	10,692.89	3,181.87
8/31/2011	1,789.40	10,976.24	6,847.20	9,839.86	67.51	1,978.68	72,296.49	2,321.62	1,629.51	12,009.69	3,746.07
9/30/2011	1,592.10	9,624.33	5,981.04	8,585.37	60.00	1,765.82	64,298.81	2,047.29	1,465.26	10,768.55	3,555.48
10/31/2011	1,714.59	10,297.37	6,356.57	9,440.36	63.66	1,960.97	68,743.27	2,158.19	1,644.07	11,829.98	4,009.23
11/30/2011	1,770.59	10,581.05	6,673.81	9,971.64	64.44	2,258.13	73,002.78	2,229.68	1,773.67	12,162.23	4,016.64
12/31/2011	1,541.53	9,508.84	6,088.65	8,895.92	57.93	2,191.26	63,030.25	2,013.71	1,668.17	11,339.57	3,724.22
1/31/2012	1,799.09	10,595.06	6,645.88	10,278.11	63.53	2,281.04	71,160.99	2,505.41	1,919.75	12,537.33	4,169.07
2/29/2012	1,998.01	10,458.28	6,569.46	10,251.45	65.27	2,303.90	70,297.98	2,491.59	1,995.19	12,273.21	4,258.02
3/31/2012	1,945.83	10,134.71	6,193.32	10,074.78	61.52	2,420.31	69,014.49	2,439.22	2,553.88	11,907.24	4,153.13
4/30/2012	1,914.64	10,115.37	6,211.11	10,017.71	61.19	2,380.75	68,491.43	2,402.05	2,545.21	11,778.30	4,175.11
5/31/2012	1,558.04	9,669.83	5,915.38	9,056.25	57.62	2,131.04	63,771.37	2,250.00	1,766.95	11,018.44	3,932.25
6/30/2012	1,805.95	10,175.06	6,226.97	9,517.33	58.83	2,345.27	65,769.52	2,329.40	1,906.82	11,582.15	4,023.76
7/31/2012	1,805.25	10,457.71	6,456.65	9,724.32	59.39	2,657.02	64,912.05	2,375.00	1,924.05	11,837.72	4,103.30

Estimated assets held by physical gold ETPs based on market capitalization
Million troy ounces
Source: ETP providers, CMX

	DB PHYSICAL GOLD	ETFS PHYSICAL GOLD	GOLD BULLION SECURITIES LTD	ISHARES GOLD TRUST	RBS PHYSICAL GOLD	SOURCE PHYSICAL GOLD P-ETC	SPDR GOLD TRUST	SPROTT PHYSICAL GOLD TRUST	UBS GOLD ETF	ZKB GOLD ETF	OTHER (n=15)
1/31/2004		0.26									
2/29/2004		0.26									
3/31/2004		0.26									
4/30/2004		0.26									
5/31/2004		0.26									
6/30/2004		0.26									
7/31/2004		0.26									
8/31/2004		0.26									
9/30/2004		0.26									
10/31/2004		0.26									
11/30/2004		0.26					3.33				
12/31/2004		0.26					3.05				
1/31/2005		0.26		0.04			4.89				
2/28/2005		0.26	1.63	1.50			5.05				
3/31/2005		0.26	1.64	0.70			5.27				
4/30/2005		0.26	1.63	0.40			5.73				
5/31/2005		0.26	1.63	0.40			5.77				
6/30/2005		0.26	1.64	0.40			5.62				
7/31/2005		0.26	1.63	0.44			6.03				
8/31/2005		0.26	1.63	0.44			6.25				
9/30/2005		0.26	1.64	0.51			6.66				
10/31/2005		0.26	1.63	0.60			6.78				
11/30/2005		0.26	1.64	0.63			7.35				
12/31/2005		0.26	1.62	0.71			8.45				
1/31/2006		0.26	1.63	0.92			10.71				
2/28/2006		0.26	1.62	1.11			11.02				
3/31/2006		0.26	1.64	1.15			11.22				
4/30/2006		0.26	1.63	1.25			11.53				
5/31/2006		0.26	1.63	1.31			11.37				
6/30/2006		0.26	1.62	1.32			11.96				
7/31/2006		0.26	1.63	1.36			12.40				
8/31/2006		0.26	1.62	1.38			12.58				
9/30/2006		0.26	1.62	1.39			12.43				
10/31/2006		0.26	1.62	1.36			12.50				
11/30/2006		0.26	1.62	1.37			14.24				
12/31/2006		0.26	1.62	1.43			14.55				
1/31/2007		0.26	1.63	1.41			14.62				
2/28/2007		0.26	1.61	1.42			15.43				
3/31/2007		0.26	1.63	1.44			15.57				0.03
4/30/2007		0.26	1.62	1.43			15.71				0.08
5/31/2007		0.26	1.62	1.48			15.07				0.08
6/30/2007		0.26	1.62	1.47			14.89				0.08
7/31/2007		0.26	1.62	1.49			15.91				0.08
8/31/2007		0.26	1.61	1.51			16.49				0.08
9/30/2007		0.26	1.62	1.61			18.60				0.08
10/31/2007		0.26	1.61	1.68			19.21				0.08
11/30/2007		0.26	1.62	1.74			19.34				0.13
12/31/2007		0.26	1.61	1.77			20.10				0.12
1/31/2008		0.26	1.62	1.90			20.38				0.12
2/29/2008		0.26	1.62	1.93			20.54				0.12
3/31/2008		0.26	1.64	2.06			20.63				0.13
4/30/2008		0.26	1.62	2.04			18.94				0.13
5/31/2008		0.25	1.62	1.97			19.20				0.12
6/30/2008		0.25	1.60	1.96			20.68				0.13
7/31/2008		0.26	1.62	1.97			21.65				0.13
8/31/2008		0.26	1.62	1.91			20.89				0.13
9/30/2008		0.41	1.63	2.02			23.99				0.12
10/31/2008		1.88	1.62	2.10			24.30				0.17
11/30/2008		1.92	1.60	2.10			24.36				0.21
12/31/2008		2.21	1.57	2.14			24.94			3.13	0.24
1/31/2009		2.57	1.60	2.21			27.15			3.54	0.27
2/28/2009		2.75	4.27	2.18			33.07			4.05	0.31
3/31/2009		2.95	4.31	2.17			36.08			4.35	0.37
4/30/2009		3.10	4.27	2.19			35.38			4.53	0.40
5/31/2009		3.13	4.33	2.25			35.98			4.56	0.46
6/30/2009		3.20	4.33	2.28		0.00	36.06			4.68	0.84
7/31/2009		3.06	4.17	2.32		0.00	34.39			4.73	0.88
8/31/2009		3.84	4.13	2.36		0.01	34.12			4.79	0.96
9/30/2009		4.16	4.22	2.40		0.01	35.20			4.82	0.97
10/31/2009		3.84	4.23	2.58		0.07	35.65			4.81	1.00
11/30/2009		3.91	4.14	2.63		0.19	36.28			4.79	1.25
12/31/2009		4.07	4.02	2.55		0.19	36.40		0.01	4.67	1.27
1/31/2010		3.91	3.93	2.55		0.15	35.69		0.03	4.71	1.29
2/28/2010		4.12	3.83	2.46		0.21	35.53	0.34	0.05	4.80	1.23
3/31/2010		4.05	3.74	2.47		0.24	36.30	0.39	0.09	5.03	1.03
4/30/2010		4.30	3.68	2.52	0.01	0.27	37.19	0.42	0.13	5.05	1.02
5/31/2010		4.94	3.89	2.71	0.03	0.32	40.85	0.66	0.18	5.35	1.08
6/30/2010	0.01	5.23	3.97	2.76	0.03	0.37	42.38	0.65	0.24	5.52	1.08
7/31/2010	0.03	5.12	3.92	2.92	0.04	0.37	41.19	0.64	0.30	5.63	1.13
8/31/2010	0.27	5.24	4.08	3.07	0.04	0.38	41.86	0.66	0.40	5.77	1.12
9/30/2010	0.34	5.39	4.02	3.21	0.04	0.41	41.98	0.85	0.52	5.90	1.15
10/31/2010	0.38	5.47	3.97	3.30	0.04	0.46	41.57	0.85	0.52	5.85	1.14
11/30/2010	0.42	5.60	3.92	3.46	0.04	0.60	41.41	0.86	0.52	5.92	1.18
12/31/2010	0.46	5.61	3.94	3.78	0.04	0.65	41.16	0.84	0.57	5.99	1.22
1/31/2011	0.44	5.40	3.75	3.56	0.04	0.63	39.36	0.85	0.59	6.05	1.11
2/28/2011	0.48	5.40	3.77	3.81	0.04	0.67	38.96	0.86	0.69	6.04	1.55
3/31/2011	0.58	5.47	3.70	4.02	0.04	0.70	38.80	0.85	0.73	6.13	1.64
4/30/2011	0.74	5.52	3.67	4.35	0.04	0.71	39.69	1.10	0.76	6.24	1.80
5/31/2011	0.69	5.49	3.65	4.44	0.04	0.77	38.90	1.08	0.77	6.30	1.85
6/30/2011	0.77	5.61	3.64	4.64	0.04	0.78	38.73	1.08	0.81	6.35	1.91
7/31/2011	0.95	5.86	3.66	5.04	0.04	0.90	40.54	1.23	0.85	6.57	1.95
8/31/2011	0.98	6.00	3.74	5.38	0.04	1.08	39.52	1.27	0.89	6.57	2.05
9/30/2011	0.98	5.94	3.69	5.30	0.04	1.09	39.68	1.26	0.90	6.65	2.19
10/31/2011	0.99	5.97	3.68	5.47	0.04	1.14	39.85	1.25	0.95	6.86	2.32
11/30/2011	1.01	6.06	3.82	5.71	0.04	1.29	41.82	1.28	1.02	6.97	2.30
12/31/2011	0.98	6.07	3.89	5.68	0.04	1.40	40.23	1.29	1.06	7.24	2.38
1/31/2012	1.04	6.10	3.82	5.91	0.04	1.31	40.95	1.44	1.10	7.21	2.40
2/29/2012	1.17	6.11	3.84	5.99	0.04	1.35	41.08	1.46	1.17	7.17	2.49
3/31/2012	1.17	6.07	3.71	6.04	0.04	1.45	41.34	1.46	1.53	7.13	2.49
4/30/2012	1.15	6.08	3.73	6.02	0.04	1.43	41.16	1.44	1.53	7.08	2.51
5/31/2012	1.00	6.19	3.79	5.80	0.04	1.36	40.81	1.44	1.13	7.05	2.52
6/30/2012	1.13	6.34	3.88	5.93	0.04	1.46	41.00	1.45	1.19	7.22	2.51
7/31/2012	1.12	6.49	4.01	6.04	0.04	1.65	40.31	1.47	1.19	7.35	2.55

Assets held by physical silver ETPs
US$ millions
Source: ETP providers

	DB PHYSICAL SILVER	JAPAN PHYSICAL SILVER ETF	JB PHYSICAL SILVER	ETFS SILVER TRUST	ISHARES SILVER TRUST	SOURCE PHYSICAL SILVER P-ETC	SPROTT PHYSICAL SILVER TRUST	UBS SILVER ETF	ZKB SILVER ETF
1/31/2004									
2/29/2004									
3/31/2004									
4/30/2004									
5/31/2004									
6/30/2004									
7/31/2004									
8/31/2004									
9/30/2004									
10/31/2004									
11/30/2004									
12/31/2004									
1/31/2005									
2/28/2005									
3/31/2005									
4/30/2005									
5/31/2005									
6/30/2005									
7/31/2005									
8/31/2005									
9/30/2005									
10/31/2005									
11/30/2005									
12/31/2005									
1/31/2006									
2/28/2006									
3/31/2006									
4/30/2006					290.05				
5/31/2006					871.33				
6/30/2006					924.54				
7/31/2006					1,055.89				
8/31/2006					1,297.25				
9/30/2006					1,196.63				
10/31/2006					1,288.14				
11/30/2006					1,536.48				
12/31/2006					1,562.98				
1/31/2007					1,588.13				
2/28/2007					1,786.81				
3/31/2007					1,769.14				
4/30/2007					1,806.89				
5/31/2007					1,826.78				
6/30/2007					1,691.95				
7/31/2007					1,824.29				
8/31/2007					1,667.72				
9/30/2007					1,973.15				
10/31/2007					2,082.20				
11/30/2007					2,036.35				
12/31/2007					2,498.49				
1/31/2008					2,758.15				
2/29/2008					3,422.23				
3/31/2008					3,084.42				
4/30/2008					3,135.00				
5/31/2008					3,242.90				
6/30/2008					3,366.29				
7/31/2008					3,576.12				
8/31/2008					2,814.39				
9/30/2008					2,641.36				
10/31/2008				126.65	2,104.73				
11/30/2008				132.44	2,227.07				
12/31/2008				141.64	2,478.00				370.33
1/31/2009				171.42	3,040.48				487.25
2/28/2009				182.83	3,352.02				551.65
3/31/2009				200.19	3,460.33				569.82
4/30/2009				204.21	3,351.03				569.51
5/31/2009				285.55	4,346.30				742.59
6/30/2009				232.78	3,811.29				674.67
7/31/2009				240.31	3,950.40				717.86
8/31/2009				372.00	4,141.12				795.45
9/30/2009				433.71	4,603.60				902.81
10/31/2009				452.84	4,595.22				888.96
11/30/2009				561.05	5,584.76				1,043.49
12/31/2009				520.47	5,138.67				1,007.86
1/31/2010			8.88	478.29	4,870.97				968.77
2/28/2010			3.44	503.10	4,988.93				1,036.81
3/31/2010			10.77	550.15	5,177.14				1,147.29
4/30/2010			16.07	583.38	5,335.57				1,239.25
5/31/2010			17.72	614.39	5,474.81				1,288.08
6/30/2010	11.15		17.94	632.66	5,470.28				1,342.10
7/31/2010	24.01	5.39	22.13	631.08	5,300.37				1,348.09
8/31/2010	66.83	5.82	23.72	706.65	5,768.92				1,524.19
9/30/2010	115.50	6.66	33.68	841.69	6,851.17				1,735.53
10/31/2010	144.57	13.10	40.58	975.78	8,055.86				1,920.29
11/30/2010	187.82	25.48	52.55	1,163.22	9,727.48		678.51	6.12	2,196.11
12/31/2010	216.58	33.83	57.54	1,401.69	10,840.66		809.03	7.43	2,416.56
1/31/2011	182.89	41.03	50.35	1,238.97	9,377.65		718.18	3.81	2,215.87
2/28/2011	196.06	48.78	63.28	1,483.89	11,654.72		879.75	5.86	2,669.20
3/31/2011	244.65	54.94	74.13	1,735.72	13,487.24		1,011.43	9.19	2,919.04
4/30/2011	317.82	103.37	134.10	2,273.78	17,020.92	0.60	1,249.48	14.80	3,502.66
5/31/2011	236.56	118.36	102.09	1,568.97	12,327.75	2.31	1,016.03	11.97	2,668.06
6/30/2011	246.09	109.60	109.25	1,479.38	10,648.34	2.09	909.65	20.81	2,440.86
7/31/2011	311.81	98.31	184.00	1,765.23	12,665.12	2.40	1,063.18	31.47	2,931.15
8/31/2011	279.97	88.23	185.30	1,835.74	13,087.26	2.49	1,114.35	30.78	3,075.23
9/30/2011	196.71	66.05	144.55	1,348.91	9,596.04	1.81	799.22	23.53	2,383.69
10/31/2011	198.79	72.76	178.93	1,588.23	10,816.84	2.05	893.52	29.67	2,777.94
11/30/2011	181.25	62.84	162.15	1,555.25	10,277.44	3.93	844.64	27.56	2,675.56
12/31/2011	249.02	56.92	144.17	1,315.97	8,566.34	4.19	772.19	24.27	2,425.80
1/31/2012	298.49	67.59	175.59	1,551.77	10,272.29	4.98	1,191.19	32.61	2,880.22
2/29/2012	331.23	71.78	173.02	1,604.74	10,855.83	5.30	1,251.28	35.94	2,926.30
3/31/2012	271.17	55.57	164.10	1,523.80	10,071.53	5.16	1,143.10	35.38	2,775.68
4/30/2012	299.35	52.21	160.19	1,439.25	9,537.32	4.91	1,080.20	37.37	2,679.40
5/31/2012	267.74	46.93	134.30	1,246.36	8,624.63	4.44	977.04	32.37	2,433.35
6/30/2012	302.51	49.07	142.57	1,243.38	8,566.77	4.39	971.17	33.32	2,437.38
7/31/2012	291.17	53.70	152.90	1,272.96	8,742.34	4.49	1,154.26	34.26	2,542.13

Estimated assets held by physical silver ETPs based on market capitalization
Million troy ounces
Source: ETP providers, CMX

	DB PHYSICAL SILVER	JAPAN PHYSICAL SILVER ETF	JB PHYSICAL SILVER	ETFS SILVER TRUST	ISHARES SILVER TRUST	SOURCE PHYSICAL SILVER P-ETC	SPROTT PHYSICAL SILVER TRUST	UBS SILVER ETF	ZKB SILVER ETF
1/31/2004	0.00			0.00	0.00			0.00	0.00
2/29/2004	0.00			0.00	0.00			0.00	0.00
3/31/2004	0.00			0.00	0.00			0.00	0.00
4/30/2004	0.00			0.00	0.00			0.00	0.00
5/31/2004	0.00			0.00	0.00			0.00	0.00
6/30/2004	0.00			0.00	0.00			0.00	0.00
7/31/2004	0.00			0.00	0.00			0.00	0.00
8/31/2004	0.00			0.00	0.00			0.00	0.00
9/30/2004	0.00			0.00	0.00			0.00	0.00
10/31/2004	0.00			0.00	0.00			0.00	0.00
11/30/2004	0.00			0.00	0.00			0.00	0.00
12/31/2004	0.00			0.00	0.00			0.00	0.00
1/31/2005	0.00			0.00	0.00			0.00	0.00
2/28/2005	0.00			0.00	0.00			0.00	0.00
3/31/2005	0.00			0.00	0.00			0.00	0.00
4/30/2005	0.00			0.00	0.00			0.00	0.00
5/31/2005	0.00			0.00	0.00			0.00	0.00
6/30/2005	0.00			0.00	0.00			0.00	0.00
7/31/2005	0.00			0.00	0.00			0.00	0.00
8/31/2005	0.00			0.00	0.00			0.00	0.00
9/30/2005	0.00			0.00	0.00			0.00	0.00
10/31/2005	0.00			0.00	0.00			0.00	0.00
11/30/2005	0.00			0.00	0.00			0.00	0.00
12/31/2005	0.00			0.00	0.00			0.00	0.00
1/31/2006	0.00			0.00	0.00			0.00	0.00
2/28/2006	0.00			0.00	0.00			0.00	0.00
3/31/2006	0.00			0.00	0.00			0.00	0.00
4/30/2006	0.00			0.00	21.47			0.00	0.00
5/31/2006	0.00			0.00	69.96			0.00	0.00
6/30/2006	0.00			0.00	85.34			0.00	0.00
7/31/2006	0.00			0.00	92.87			0.00	0.00
8/31/2006	0.00			0.00	100.56			0.00	0.00
9/30/2006	0.00			0.00	103.69			0.00	0.00
10/31/2006	0.00			0.00	104.98			0.00	0.00
11/30/2006	0.00			0.00	110.34			0.00	0.00
12/31/2006	0.00			0.00	121.94			0.00	0.00
1/31/2007	0.00			0.00	117.03			0.00	0.00
2/28/2007	0.00			0.00	126.72			0.00	0.00
3/31/2007	0.00			0.00	131.53			0.00	0.00
4/30/2007	0.00			0.00	134.39			0.00	0.00
5/31/2007	0.00			0.00	135.62			0.00	0.00
6/30/2007	0.00			0.00	136.97			0.00	0.00
7/31/2007	0.00			0.00	140.15			0.00	0.00
8/31/2007	0.00			0.00	138.25			0.00	0.00
9/30/2007	0.00			0.00	141.75			0.00	0.00
10/31/2007	0.00			0.00	144.22			0.00	0.00
11/30/2007	0.00			0.00	145.84			0.00	0.00
12/31/2007	0.00			0.00	168.85			0.00	0.00
1/31/2008	0.00			0.00	162.29			0.00	0.00
2/29/2008	0.00			0.00	172.77			0.00	0.00
3/31/2008	0.00			0.00	178.19			0.00	0.00
4/30/2008	0.00			0.00	189.98			0.00	0.00
5/31/2008	0.00			0.00	192.29			0.00	0.00
6/30/2008	0.00			0.00	193.24			0.00	0.00
7/31/2008	0.00			0.00	201.02			0.00	0.00
8/31/2008	0.00			0.00	206.83			0.00	0.00
9/30/2008	0.00			0.00	215.18			0.00	0.00
10/31/2008	0.00			13.02	216.31			0.00	0.00
11/30/2008	0.00			13.00	218.66			0.00	0.00
12/31/2008	0.00			12.57	219.88			0.00	32.86
1/31/2009	0.00			13.64	241.98			0.00	38.78
2/28/2009	0.00			13.97	256.17			0.00	42.16
3/31/2009	0.00			15.42	266.49			0.00	43.88
4/30/2009	0.00			16.60	272.33			0.00	46.28
5/31/2009	0.00			18.29	278.43			0.00	47.57
6/30/2009	0.00			17.15	280.78			0.00	49.70
7/31/2009	0.00			17.24	283.39			0.00	51.50
8/31/2009	0.00			24.97	277.96			0.00	53.39
9/30/2009	0.00			26.04	276.36			0.00	54.20
10/31/2009	0.00			27.86	282.70			0.00	54.69
11/30/2009	0.00			30.34	301.96			0.00	56.42
12/31/2009	0.00			30.94	305.47			0.00	59.91
1/31/2010	0.00		0.55	29.54	300.86			0.00	59.84
2/28/2010	0.00		0.21	30.49	302.36			0.00	62.84
3/31/2010	0.00		0.61	31.39	295.40			0.00	65.46
4/30/2010	0.00		0.86	31.35	286.69			0.00	66.59
5/31/2010	0.00		0.96	33.35	297.19			0.00	69.92
6/30/2010	0.60		0.96	33.88	292.98			0.00	71.88
7/31/2010	1.33	0.30	1.23	35.05	294.42			0.00	74.88
8/31/2010	3.45	0.30	1.22	36.43	297.40			0.00	78.57
9/30/2010	5.29	0.31	1.54	38.57	313.97			0.00	79.53
10/31/2010	5.89	0.53	1.65	39.72	327.95			0.00	78.17
11/30/2010	6.66	0.90	1.86	41.27	345.13		24.07	0.22	77.92
12/31/2010	7.01	1.09	1.86	45.35	350.72		26.17	0.24	78.18
1/31/2011	6.49	1.46	1.79	43.98	332.91		25.50	0.14	78.66
2/28/2011	5.80	1.44	1.87	43.90	344.77		26.03	0.17	78.96
3/31/2011	6.46	1.45	1.96	45.81	355.98		26.70	0.24	77.04
4/30/2011	6.54	2.13	2.76	46.80	350.34	0.01	25.72	0.30	72.09
5/31/2011	6.18	3.09	2.67	40.96	321.83	0.06	26.52	0.31	69.65
6/30/2011	7.07	3.15	3.14	42.50	305.88	0.06	26.13	0.60	70.12
7/31/2011	7.77	2.45	4.59	44.01	315.79	0.06	26.51	0.78	73.09
8/31/2011	6.71	2.12	4.44	44.02	313.85	0.06	26.72	0.74	73.75
9/30/2011	6.54	2.20	4.80	44.84	318.99	0.06	26.57	0.78	79.24
10/31/2011	5.79	2.12	5.21	46.23	314.86	0.06	26.01	0.86	80.86
11/30/2011	5.54	1.92	4.95	47.52	314.00	0.12	25.81	0.84	81.74
12/31/2011	8.93	2.04	5.17	47.21	307.31	0.15	27.70	0.87	87.02
1/31/2012	8.97	2.03	5.28	46.65	308.83	0.15	35.81	0.98	86.59
2/29/2012	9.58	2.08	5.00	46.40	313.91	0.15	36.18	1.04	84.62
3/31/2012	8.35	1.71	5.05	46.91	310.05	0.16	35.19	1.09	85.45
4/30/2012	9.67	1.69	5.17	46.49	308.06	0.16	34.89	1.21	86.55
5/31/2012	9.65	1.69	4.84	44.90	310.72	0.16	35.20	1.17	87.67
6/30/2012	10.97	1.78	5.17	45.08	310.62	0.16	35.21	1.21	88.37
7/31/2012	10.43	1.92	5.48	45.60	313.19	0.16	41.35	1.23	91.07

Assets held by physical platinum ETPs
US$ millions
Source: ETP providers

	DB PHYSICAL PLATINUM	JAPAN PHYSICAL PLATINUM	JB PHYSICAL PLATINUM	ETFS PLATINUM	ISHARES PLATINUM	SOURCE PHYSICAL PLATINUM	UBS PLATINUM	ZKB PLATINUM
1/31/2004								
2/29/2004								
3/31/2004								
4/30/2004								
5/31/2004								
6/30/2004								
7/31/2004								
8/31/2004								
9/30/2004								
10/31/2004								
11/30/2004								
12/31/2004								
1/31/2005								
2/28/2005								
3/31/2005								
4/30/2005								
5/31/2005								
6/30/2005								
7/31/2005								
8/31/2005								
9/30/2005								
10/31/2005								
11/30/2005								
12/31/2005								
1/31/2006								
2/28/2006								
3/31/2006								
4/30/2006								
5/31/2006								
6/30/2006								
7/31/2006								
8/31/2006								
9/30/2006								
10/31/2006								
11/30/2006								
12/31/2006								
1/31/2007								
2/28/2007								
3/31/2007								
4/30/2007				5.17				
5/31/2007				19.47				
6/30/2007				34.33				
7/31/2007				32.25				
8/31/2007				27.57				
9/30/2007				32.36				
10/31/2007				42.01				
11/30/2007				145.03				
12/31/2007				201.71				
1/31/2008				321.46				
2/29/2008				656.44				
3/31/2008				663.24				
4/30/2008				640.37				
5/31/2008				734.82				
6/30/2008				818.48				
7/31/2008				613.51				
8/31/2008				292.60				
9/30/2008				186.09				
10/31/2008				101.59				
11/30/2008				109.36				
12/31/2008				146.07				114.62
1/31/2009				171.16				130.47
2/28/2009				220.85				172.32
3/31/2009				332.69				184.86
4/30/2009				355.95				186.31
5/31/2009				324.41				206.70
6/30/2009				366.17				210.95
7/31/2009				377.49				214.44
8/31/2009				396.91				231.58
9/30/2009				448.32				265.84
10/31/2009				483.18				289.60
11/30/2009				593.61				336.60
12/31/2009				609.24				356.99
1/31/2010			3.47	919.44				366.42
2/28/2010			3.49	1,022.14				378.31
3/31/2010			4.51	1,103.04				426.42
4/30/2010			6.97	1,261.58				467.43
5/31/2010			10.84	1,107.84				456.08
6/30/2010			10.64	1,054.77				467.20
7/31/2010	10.86	8.19	13.96	1,027.40				478.20
8/31/2010	10.66	7.88	16.50	1,005.62				462.60
9/30/2010	11.53	8.50	18.12	1,068.19			4.21	508.57
10/31/2010	11.90	8.81	20.33	1,151.46			5.20	537.54
11/30/2010	11.61	8.62	27.19	1,213.23			5.77	533.22
12/31/2010	12.20	9.19	36.23	1,462.84			8.17	575.27
1/31/2011	30.31	9.34	43.01	1,491.72			10.34	616.33
2/28/2011	30.61	11.26	48.11	1,593.83			13.45	657.55
3/31/2011	21.30	10.95	50.73	1,571.96			18.99	651.86
4/30/2011	89.10	11.20	58.44	1,665.54	5.25	33.02	26.03	679.20
5/31/2011	88.55	11.00	57.19	1,583.72	6.06	41.57	26.14	667.39
6/30/2011	83.26	10.63	54.28	1,464.23	5.68	60.45	32.39	626.84
7/31/2011	86.23	15.39	59.54	1,600.73	5.88	67.28	44.98	653.38
8/31/2011	89.23	21.10	57.38	1,728.16	6.09	66.84	49.32	667.14
9/30/2011	73.00	17.50	46.35	1,354.74	4.97	45.53	65.64	541.67
10/31/2011	77.50	24.16	62.35	1,393.71	5.29	22.18	72.09	597.54
11/30/2011	74.95	23.10	58.45	1,283.69	5.10	12.13	68.62	571.29
12/31/2011	66.75	23.09	53.26	1,118.12	4.56	7.38	63.44	510.45
1/31/2012	77.28	26.51	66.39	1,330.46	5.27	8.54	74.35	587.42
2/29/2012	82.88	28.12	71.34	1,515.81	5.56	7.87	79.97	603.54
3/31/2012	78.40	24.10	67.86	1,455.26	5.35	23.80	97.40	579.36
4/30/2012	75.38	23.42	64.71	1,367.05	5.14	22.89	91.99	554.07
5/31/2012	67.53	20.98	57.42	1,172.08	4.61	20.48	82.91	495.29
6/30/2012	68.53	22.30	58.45	1,224.12	4.68	20.83	84.34	501.57
7/31/2012	61.33	24.02	54.85	1,211.74	4.67	20.77	83.30	500.54

Estimated assets held by physical platinum ETPs based on market capitalization
Thousand troy ounces
Source: ETP providers, NYMEX

	DB PHYSICAL PLATINUM	JAPAN PHYSICAL PLATINUM	JB PHYSICAL PLATINUM	ETFS PLATINUM	ISHARES PLATINUM	SOURCE PHYSICAL PLATINUM	UBS PLATINUM	ZKB PLATINUM
1/31/2004								
2/29/2004								
3/31/2004								
4/30/2004								
5/31/2004								
6/30/2004								
7/31/2004								
8/31/2004								
9/30/2004								
10/31/2004								
11/30/2004								
12/31/2004								
1/31/2005								
2/28/2005								
3/31/2005								
4/30/2005								
5/31/2005								
6/30/2005								
7/31/2005								
8/31/2005								
9/30/2005								
10/31/2005								
11/30/2005								
12/31/2005								
1/31/2006								
2/28/2006								
3/31/2006								
4/30/2006								
5/31/2006								
6/30/2006								
7/31/2006								
8/31/2006								
9/30/2006								
10/31/2006								
11/30/2006								
12/31/2006								
1/31/2007								
2/28/2007								
3/31/2007								
4/30/2007				3.98				
5/31/2007				15.15				
6/30/2007				26.84				
7/31/2007				24.76				
8/31/2007				21.68				
9/30/2007				23.19				
10/31/2007				29.02				
11/30/2007				100.43				
12/31/2007				131.98				
1/31/2008				185.02				
2/29/2008				301.02				
3/31/2008				327.62				
4/30/2008				330.91				
5/31/2008				364.89				
6/30/2008				395.50				
7/31/2008				348.21				
8/31/2008				196.40				
9/30/2008				183.32				
10/31/2008				122.16				
11/30/2008				123.95				
12/31/2008				156.02				122.43
1/31/2009				172.66				131.61
2/28/2009				203.49				158.78
3/31/2009				296.83				164.94
4/30/2009				321.66				168.36
5/31/2009				271.24				172.83
6/30/2009				311.18				179.27
7/31/2009				310.90				176.61
8/31/2009				319.06				186.16
9/30/2009				346.03				205.19
10/31/2009				364.31				218.36
11/30/2009				406.52				230.52
12/31/2009				417.28				244.51
1/31/2010			2.30	610.52				243.30
2/28/2010			2.27	663.77				245.67
3/31/2010			2.75	672.67				260.04
4/30/2010			3.99	722.93				267.85
5/31/2010			7.00	715.01				294.36
6/30/2010			6.95	688.99				305.18
7/31/2010	6.89	5.19	8.85	651.57				303.27
8/31/2010	7.00	5.17	10.83	660.07				303.64
9/30/2010	6.98	5.14	10.97	646.61			2.55	307.85
10/31/2010	6.97	5.16	11.91	674.51			3.04	314.89
11/30/2010	6.97	5.17	16.32	728.05			3.46	319.98
12/31/2010	6.88	5.18	20.43	824.93			4.61	324.41
1/31/2011	16.83	5.18	23.88	828.32			5.74	342.23
2/28/2011	16.92	6.23	26.59	880.96			7.43	363.45
3/31/2011	11.97	6.15	28.51	883.47			10.67	366.36
4/30/2011	47.76	6.00	31.33	892.81	2.82	17.70	13.95	364.09
5/31/2011	48.28	6.00	31.18	863.53	3.30	22.67	14.25	363.90
6/30/2011	48.27	6.16	31.47	848.93	3.29	35.05	18.78	363.43
7/31/2011	48.30	8.62	33.35	896.62	3.30	37.69	25.19	365.98
8/31/2011	48.07	11.37	30.91	931.02	3.28	36.01	26.57	359.41
9/30/2011	48.04	11.52	30.51	891.63	3.27	29.97	43.20	356.50
10/31/2011	48.21	15.03	38.79	866.95	3.29	13.80	44.84	371.70
11/30/2011	48.02	14.80	37.45	822.46	3.27	7.77	43.97	366.03
12/31/2011	47.69	16.50	38.05	798.83	3.26	5.27	45.33	364.68
1/31/2012	48.66	16.69	41.80	837.77	3.32	5.38	46.82	369.89
2/29/2012	48.96	16.61	42.15	895.55	3.29	4.65	47.24	356.58
3/31/2012	47.85	14.71	41.42	888.27	3.26	14.53	59.45	353.63
4/30/2012	47.96	14.90	41.17	869.68	3.27	14.56	58.52	352.49
5/31/2012	47.63	14.80	40.50	826.80	3.25	14.45	58.48	349.38
6/30/2012	47.29	15.39	40.34	844.74	3.23	14.38	58.20	346.12
7/31/2012	43.28	16.95	38.71	855.20	3.30	14.66	58.79	353.27

Assets held by physical palladium ETPs
US$ millions
Source: ETP providers

	DB PHYSICAL PALLADIUM	JAPAN PHYSICAL PALLADIUM	JB PHYSICAL PALLADIUM	ETFS PALLADIUM	ISHARES PALLADIUM	SOURCE PHYSICAL PALLADIUM	UBS PALLADIUM	ZKB PALLADIUM
1/31/2004								
2/29/2004								
3/31/2004								
4/30/2004								
5/31/2004								
6/30/2004								
7/31/2004								
8/31/2004								
9/30/2004								
10/31/2004								
11/30/2004								
12/31/2004								
1/31/2005								
2/28/2005								
3/31/2005								
4/30/2005								
5/31/2005								
6/30/2005								
7/31/2005								
8/31/2005								
9/30/2005								
10/31/2005								
11/30/2005								
12/31/2005								
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2/28/2006								
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7/31/2007								
8/31/2007								
9/30/2007								
10/31/2007								
11/30/2007								
12/31/2007								
1/31/2008								
2/29/2008								
3/31/2008								
4/30/2008								
5/31/2008								
6/30/2008								
7/31/2008								
8/31/2008								
9/30/2008								
10/31/2008				40.54				
11/30/2008				27.81				
12/31/2008				24.70				90.80
1/31/2009				26.83				101.62
2/28/2009				42.99				105.44
3/31/2009				48.47				118.78
4/30/2009				55.85				122.65
5/31/2009				61.33				130.65
6/30/2009				72.26				138.71
7/31/2009				82.40				143.72
8/31/2009				105.81				157.96
9/30/2009				146.95				161.46
10/31/2009				174.58				167.38
11/30/2009				216.53				181.42
12/31/2009				253.27				197.08
1/31/2010			1.53	404.63				201.85
2/28/2010			3.08	467.61				204.51
3/31/2010			3.44	568.46				225.70
4/30/2010			5.80	703.91				251.16
5/31/2010			4.96	581.70				222.19
6/30/2010			4.70	538.61				219.28
7/31/2010	12.13	3.60	5.22	591.11				221.30
8/31/2010	26.48	3.69	5.15	601.48				223.71
9/30/2010	30.88	4.25	5.92	696.83				254.04
10/31/2010	35.32	4.73	8.52	873.51				275.82
11/30/2010	37.46	5.19	11.71	1,011.11			1.90	294.38
12/31/2010	42.76	5.92	15.43	1,324.53			4.46	348.87
1/31/2011	43.62	7.42	15.74	1,395.46			1.14	367.58
2/28/2011	31.41	8.68	17.38	1,350.51			1.31	359.86
3/31/2011	24.20	9.40	16.30	1,215.14			1.73	337.26
4/30/2011	29.69	9.43	20.71	1,269.18	5.01	36.74	2.01	349.36
5/31/2011	26.57	9.35	20.48	1,190.18	4.99	42.41	2.61	338.65
6/30/2011	27.29	9.22	19.93	1,152.62	4.85	50.97	7.09	317.29
7/31/2011	31.27	10.11	22.94	1,236.63	5.28	57.92	8.32	346.40
8/31/2011	30.10	9.50	48.48	1,085.70	5.00	49.31	9.03	329.70
9/30/2011	22.93	7.70	40.43	745.99	3.89	58.06	5.91	250.09
10/31/2011	22.47	8.08	45.45	728.77	4.14	63.04	12.25	267.40
11/30/2011	22.58	7.19	42.38	641.60	3.90	57.84	10.07	244.26
12/31/2011	19.78	7.74	43.78	646.46	4.05	60.17	10.45	247.43
1/31/2012	21.56	8.33	47.67	733.60	4.38	65.14	11.58	265.92
2/29/2012	33.51	8.68	49.29	837.14	4.48	71.77	11.99	271.31
3/31/2012	33.26	7.85	44.96	816.93	4.09	61.41	10.09	248.10
4/30/2012	39.99	8.14	46.16	886.28	4.30	71.28	9.71	255.68
5/31/2012	35.00	7.44	41.32	805.84	3.85	63.78	9.16	226.74
6/30/2012	36.91	6.99	39.67	760.89	3.71	56.70	8.95	210.97
7/31/2012	39.78	7.48	42.04	764.96	3.76	57.41	8.83	214.94

Estimated assets held by physical palladium ETPs based on market capitalization
Thousand troy ounces
Source: ETP providers, NYMEX

	DB PHYSICAL PALLADIUM	JAPAN PHYSICAL PALLADIUM	JB PHYSICAL PALLADIUM	ETFS PALLADIUM	ISHARES PALLADIUM	SOURCE PHYSICAL PALLADIUM	UBS PALLADIUM	ZKB PALLADIUM
1/31/2004								
2/29/2004								
3/31/2004								
4/30/2004								
5/31/2004								
6/30/2004								
7/31/2004								
8/31/2004								
9/30/2004								
10/31/2004								
11/30/2004								
12/31/2004								
1/31/2005								
2/28/2005								
3/31/2005								
4/30/2005								
5/31/2005								
6/30/2005								
7/31/2005								
8/31/2005								
9/30/2005								
10/31/2005								
11/30/2005								
12/31/2005								
1/31/2006								
2/28/2006								
3/31/2006								
4/30/2006								
5/31/2006								
6/30/2006								
7/31/2006								
8/31/2006								
9/30/2006								
10/31/2006								
11/30/2006								
12/31/2006								
1/31/2007								
2/28/2007								
3/31/2007								
4/30/2007								
5/31/2007								
6/30/2007								
7/31/2007								
8/31/2007								
9/30/2007								
10/31/2007								
11/30/2007								
12/31/2007								
1/31/2008								
2/29/2008								
3/31/2008								
4/30/2008								
5/31/2008								
6/30/2008								
7/31/2008								
8/31/2008								
9/30/2008								
10/31/2008				203.14				
11/30/2008				144.41				
12/31/2008				130.89				481.20
1/31/2009				138.81				525.69
2/28/2009				220.65				541.16
3/31/2009				221.54				542.89
4/30/2009				255.96				562.09
5/31/2009				259.81				553.48
6/30/2009				287.96				552.74
7/31/2009				311.42				543.17
8/31/2009				362.60				541.34
9/30/2009				491.16				539.64
10/31/2009				540.08				517.79
11/30/2009				595.60				499.02
12/31/2009				619.47				482.04
1/31/2010			3.72	980.56				489.15
2/28/2010			7.13	1,081.44				472.96
3/31/2010			7.17	1,184.41				470.26
4/30/2010			10.44	1,266.59				451.93
5/31/2010			10.74	1,259.49				481.09
6/30/2010			10.58	1,212.00				493.42
7/31/2010	24.27	7.19	10.43	1,182.23				442.59
8/31/2010	52.92	7.38	10.29	1,201.99				447.07
9/30/2010	54.05	7.45	10.36	1,219.83				444.71
10/31/2010	54.74	7.33	13.21	1,354.07				427.56
11/30/2010	53.45	7.40	16.71	1,442.48			2.71	419.98
12/31/2010	53.23	7.37	19.20	1,648.87			5.55	434.30
1/31/2011	53.18	9.05	19.19	1,701.57			1.39	448.21
2/28/2011	39.37	10.88	21.79	1,693.11			1.64	451.16
3/31/2011	31.51	12.24	21.22	1,582.42			2.26	439.19
4/30/2011	37.48	11.91	26.14	1,602.20	6.32	46.38	2.54	441.03
5/31/2011	34.11	12.00	26.29	1,527.93	6.41	54.45	3.36	434.76
6/30/2011	35.88	12.13	26.20	1,515.31	6.38	67.01	9.32	417.13
7/31/2011	37.77	12.21	27.72	1,494.05	6.38	69.98	10.05	418.51
8/31/2011	38.19	12.05	61.52	1,377.62	6.34	62.57	11.45	418.35
9/30/2011	37.31	12.52	65.78	1,213.87	6.34	94.47	9.62	406.95
10/31/2011	34.51	12.41	69.79	1,119.21	6.35	96.81	18.81	410.66
11/30/2011	37.01	11.78	69.47	1,051.80	6.39	94.81	16.51	400.42
12/31/2011	30.15	11.80	66.72	985.24	6.18	91.70	15.92	377.09
1/31/2012	31.41	12.14	69.46	1,068.84	6.39	94.91	16.87	387.45
2/29/2012	47.42	12.28	69.75	1,184.66	6.34	101.56	16.97	383.93
3/31/2012	50.84	12.00	68.73	1,248.93	6.25	93.88	15.43	379.31
4/30/2012	58.61	11.93	67.65	1,298.86	6.31	104.46	14.23	374.71
5/31/2012	57.18	12.16	67.51	1,316.52	6.28	104.20	14.96	370.42
6/30/2012	63.14	11.95	67.86	1,301.67	6.35	97.00	15.31	360.91
7/31/2012	67.36	12.66	71.19	1,295.34	6.36	97.21	14.96	363.97

Nominal and real copper prices (deflated by US CPI)

Units: US$ per metric tonne

Source: USGS, BLS, J.P. Morgan

	Nominal			Real
	US$ per mt	US CPI	CPI Factor	US$ per mt
1900	$357	8.14	0.0358	$9,978
1901	$355	8.24	0.0362	$9,801
1902	$256	8.34	0.0367	$6,983
1903	$291	8.53	0.0375	$7,761
1904	$282	8.63	0.0379	$7,434
1905	$344	8.53	0.0375	$9,175
1906	$425	8.72	0.0383	$11,088
1907	$441	9.11	0.0400	$11,013
1908	$291	8.92	0.0392	$7,422
1909	$289	8.82	0.0388	$7,455
1910	$284	9.21	0.0405	$7,015
1911	$277	9.21	0.0405	$6,842
1912	$363	9.40	0.0413	$8,786
1913	$342	10.00	0.0440	$7,781
1914	$293	10.10	0.0444	$6,600
1915	$385	10.30	0.0453	$8,504
1916	$627	11.60	0.0510	$12,297
1917	$644	13.70	0.0602	$10,694
1918	$544	16.50	0.0725	$7,501
1919	$401	18.90	0.0831	$4,827
1920	$386	19.40	0.0853	$4,527
1921	$279	17.30	0.0760	$3,669
1922	$299	16.90	0.0743	$4,025
1923	$325	17.30	0.0760	$4,274
1924	$293	17.30	0.0760	$3,853
1925	$315	17.90	0.0787	$4,004
1926	$310	17.70	0.0778	$3,985
1927	$288	17.30	0.0760	$3,787
1928	$327	17.10	0.0752	$4,351
1929	$405	17.20	0.0756	$5,357
1930	$292	16.10	0.0708	$4,126
1931	$185	14.60	0.0642	$2,883
1932	$128	13.10	0.0576	$2,223
1933	$160	13.20	0.0580	$2,758
1934	$191	13.40	0.0589	$3,243
1935	$196	13.80	0.0607	$3,231
1936	$214	14.00	0.0615	$3,478
1937	$295	14.40	0.0633	$4,661
1938	$225	14.00	0.0615	$3,656
1939	$247	14.00	0.0615	$4,014
1940	$254	14.10	0.0620	$4,098
1941	$265	15.50	0.0681	$3,890
1942	$265	16.90	0.0743	$3,567
1943	$265	17.40	0.0765	$3,465
1944	$265	17.80	0.0782	$3,387
1945	$265	18.20	0.0800	$3,313
1946	$310	21.50	0.0945	$3,280
1947	$469	23.40	0.1029	$4,560
1948	$492	24.10	0.1059	$4,645
1949	$430	23.60	0.1037	$4,145
1950	$476	25.00	0.1099	$4,332
1951	$540	26.50	0.1165	$4,636
1952	$540	26.70	0.1174	$4,601
1953	$640	26.90	0.1182	$5,413
1954	$660	26.70	0.1174	$5,624
1955	$827	26.80	0.1178	$7,020
1956	$926	27.60	0.1213	$7,633
1957	$665	28.40	0.1248	$5,327
1958	$580	28.90	0.1270	$4,566
1959	$683	29.40	0.1292	$5,285
1960	$713	29.80	0.1310	$5,443
1961	$668	30.00	0.1319	$5,066
1962	$683	30.40	0.1336	$5,111
1963	$683	30.90	0.1358	$5,029
1964	$713	31.20	0.1371	$5,199
1965	$780	31.80	0.1398	$5,580
1966	$794	32.90	0.1446	$5,491
1967	$840	33.90	0.1490	$5,637
1968	$908	35.50	0.1560	$5,819
1969	$1,050	37.70	0.1657	$6,336
1970	$1,280	39.80	0.1749	$7,317
1971	$1,150	41.10	0.1807	$6,366
1972	$1,130	42.50	0.1868	$6,049
1973	$1,310	46.20	0.2031	$6,451
1974	$1,700	51.90	0.2281	$7,452
1975	$1,410	55.50	0.2440	$5,780
1976	$1,530	58.20	0.2558	$5,981
1977	$1,470	62.10	0.2730	$5,385
1978	$1,450	67.70	0.2976	$4,873
1979	$2,030	76.70	0.3371	$6,021
1980	$2,230	86.30	0.3793	$5,879
1981	$1,860	94.00	0.4132	$4,502
1982	$1,610	97.60	0.4290	$3,753
1983	$1,690	101.30	0.4453	$3,795
1984	$1,470	105.30	0.4628	$3,176
1985	$1,480	109.30	0.4804	$3,081
1986	$1,460	110.50	0.4857	$3,006
1987	$1,820	115.40	0.5072	$3,588
1988	$2,660	120.50	0.5297	$5,022
1989	$2,890	126.10	0.5543	$5,214
1990	$2,710	133.80	0.5881	$4,608
1991	$2,410	137.90	0.6061	$3,976
1992	$2,370	141.90	0.6237	$3,800
1993	$2,020	145.80	0.6409	$3,152
1994	$2,450	149.70	0.6580	$3,723
1995	$3,050	153.50	0.6747	$4,520
1996	$2,400	158.60	0.6971	$3,443
1997	$2,360	161.30	0.7090	$3,329
1998	$1,730	163.90	0.7204	$2,401
1999	$1,670	168.30	0.7398	$2,257
2000	$1,940	174.00	0.7648	$2,537
2001	$1,690	176.70	0.7767	$2,176
2002	$1,670	180.90	0.7951	$2,100
2003	$1,880	184.30	0.8101	$2,321
2004	$2,950	190.30	0.8365	$3,527
2005	$3,830	196.80	0.8650	$4,428
2006	$6,940	201.80	0.8870	$7,824
2007	$7,230	210.04	0.9232	$7,831
2008	$7,040	210.23	0.9241	$7,619
2009	$5,320	215.95	0.9492	$5,605
2010	$7,680	218.80	0.9618	$7,985
2011	$8,818	227.51	1.0000	$8,818

ANNEX C

STRICTLY PRIVATE AND CONFIDENTIAL

COPPER Country	Brand	Producer	2011 Refinery Production (kt Cu including Production from Scrap)
Australia	**ISA**	Mount Isa Mines Ltd	2.5
	OLYDA	BHP Billiton Olympic Dam Corporation Pty Ltd	421.8
Austria	BRX	Montanwerke Brixlegg Aktiengesellschaft	184.0
Belgium	OLEN	Aurubis Belgium n.v./s.a.	348.0
Brazil	**CbM**	Caraiba Metais SA	372.0
Bulgaria	PIRDOP	Aurubis Bulgaria AD	226.0
Canada	**NORANDA (produced after October 1999)**	Xstrata Canada Corporation	264.0
Chile	**ABRA**	Sociedad Contractual Minera El Abra	124.0
	AE	Corporacion Nacional del Cobre de Chile	693.4
	AE SX EW	Corporacion Nacional del Cobre de Chile	-
	CCCP	Corporacion Nacional del Cobre de Chile	-
	CCC-SBL	Corporacion Nacional del Cobre de Chile	-
	cCc-SX-EW	Corporacion Nacional del Cobre de Chile	-
	CDA*	Compañia Minera Teck Carmen de Andacollo	6.0
	CHUQUI-P	Corporacion Nacional del Cobre de Chile	475.0
	CMCC	Compañia Minera Cerro Colorado Ltda	94.0
	COLLAHUASI (produced after December 1998)	Compania Minera Dona Ines De Collahuasi SCM	36.0
	ENM	Corporacion Nacional del Cobre de Chile	-
	ESOX (produced after April 1999)	Minera Escondida Limitada	283.0
	LBF	Compania Minera Xstrata Lomas Bayas	74.0
	MET	Minera El Tesoro	97.0
	MIC-P	Minera Michilla S.A	42.0
	MIC-T	Minera Michilla S.A	4.0
	MB	Anglo American Norte S.A.	36.0
	MV	Anglo American Norte S.A.	59.0
	QB	Compania Minera Teck Quebrada Blanca S.A.	63.0
	RT	Corporacion Nacional del Cobre de Chile	-
	SPENCE	Minera Spence S.A.	181.0
	ZALDIVAR	Compania Minera Zaldivar	131.0
China	**DJ-A**	Daye Nonferrous Metals Co., Ltd	348.3
	GUIYE	Jiangxi Copper Company Ltd.	940.0
	JCC	Jiangxi Copper Company Ltd.	-
	JINTUN (produced after 31/8/97)	Jinlong Copper Co., Ltd	403.0
	JNMC	Jinchuan Group Limited	516.0
	TIE FENG	Yunnan Copper Industry Co., Ltd	295.0
	TG	Tongling Nonferrous Metals Group Co., Ltd.	176.0
	XGC	YangGu Xiangguang Copper Co Ltd	280.0
Finland	BCH	Boliden Harjavalta Oy	241.4
Germany	HK	Aurubis AG	368.0
	NA-ESN	Aurubis AG	211.0
India	BIRLA COPPER	Hindalco Industries Limited	321.0
	BIRLA COPPER II	Hindalco Industries Limited	-
	STERLITE	Sterlite Industries (India) Ltd	371.0
	STERLITE T	Sterlite Industries (India) Ltd	154.0
Indonesia	**GRESIK**	PT Smelting	275.0
Japan	HR	Pan Pacific Copper Co., Ltd.	-
	MITSUBISHI	Mitsubishi Materials Corporation	304.0
	OSR	Onahama Smelting & Refining Co Ltd	152.0
	SR-P	Pan Pacific Copper Co., Ltd.	-
	SUMIKO N	Sumitomo Metal Mining Co Ltd	120.0
	SUMIKO S	Sumitomo Metal Mining Co Ltd	-
	SUMIKO T	Sumitomo Metal Mining Co Ltd	211.0
	TAMANO	Pan Pacific Copper Co., Ltd.	260.0
	TAMANO-P	Pan Pacific Copper Co., Ltd.	-
Korea (South)	ONSAN I	LS-Nikko Copper Inc.	568.0
	ONSAN II	LS-Nikko Copper Inc.	20.0
Laos	SEPON	Minerals and Metals Group (MMG)	79.0
Myanmar	MONYWA S&K	Myanmar Yang Tse Copper Limited	12.0
Norway	FHG	Xstrata Nickel	36.3
Oman	OMCO	Oman Mining Co LLC	20.0
Peru	**SMCV**	Sociedad Contractual Minera Cerro Verde	75.0
	SPCC-ILO	Southern Peru Copper Corporation	265.0
	SPCC-SXEW	Southern Peru Copper Corporation	-
Philippines	**PSR ISABEL**	Philippine Associated Smelting and Refining Corporation	164.0
Poland	**HMG-B**	KGHM Polska Miedz SA	226.0
	HMG-S	KGHM Polska Miedz SA	235.0
	HML	KGHM Polska Miedz SA	110.0
Russia	UMMC	JSC Uralelektromed	4.0
South Africa	PMC	Palabora Mining Company Ltd	59.0
Spain	FMS	Atlantic Copper SA	247.4
Sweden	BK	Boliden Mineral AB	219.0
USA	ATR	ASARCO LLC	145.2
	CBCC	Freeport-McMoRan Copper & Gold Inc.	190.0
	CTB	Freeport-McMoRan Copper & Gold Inc.	-
	KUC	Kennecott Utah Copper Corporation	215.3
	P*D	Freeport-McMoRan Copper & Gold Inc.	-
	PD*GO	Freeport-McMoRan Copper & Gold Inc.	-
	PDSS	Freeport-McMoRan Copper & Gold Inc.	-
	RAY	ASARCO LLC	-
Zambia	MCM	Mopani Copper Mines Plc	129.0
	REC	Konkola Copper Mines plc	121.5
LME Brand 2011 Refined Production			**13,304**
TOTAL 2011 Refined Production			**19,686**

Percentage of LME Brand 2011 Refined Production to Total 2011 Refined Productin **67.6%**

LME copper warrant holdings as of 24th July 2012

Source: LME

<Equals locations where HB has warehoues>

	On Warrant (m/t)	Cancelled & awaiting delivery (m/t)	Total On Warrant (m/t)	# of Warehouse keepers	Average Rent per metric ton per day (across Warehouse keepers)	Total Cancelled & awaiting delivery per location	Queue in Days (assuming metal split evenly per warehouse keeper)	Queue in Days (assuming metal held by 1 warehouse keeper)	Cost of Queue (assuming metal split evenly per warehouse keeper)	Cost of Queue (assuming metal held by 1 warehouse keeper)	Mid value of Warrants	Average FOT charge across Warehouse Keepers)	Estimated haulage cost to nearest HB Warehouse Location (not city of origin)	Average Freight cost (across users tendered) (per m/t)	Total Lower bound cost (m/t)	Total Higher bound cost (m/t)
Baltimore	-	4,650	4,650	7	0.41	15,075	2	11	0.81	4.46	7.50	36.43	Baltimore to Chicago	58.33	103.07	106.72
Chicago	13,650	1,600	15,250	6	0.41	52,550	6	36	2.44	14.64	7.50	36.24	Chicago to Baltimore	101.29	147.47	159.67
Mobile	100	-	100	2	0.41	147,825	50	99	20.50	40.59	**7.50**	36.23	Mobile to New Orleans	43.50	107.73	127.82
New Orleans	33,500	8,850	42,350	6	0.41	131,600	15	88	6.10	35.79	5.83	36.37	New Orleans to Baltimore	133.84	182.14	211.82
St Louis	58,175	2,475	60,650	2	0.41	2,475	1	2	0.41	0.82	**7.50**	36.23	St Louis to Chicago	37.41	81.55	81.96
Total	105,425	17,575	123,000													

	On Warrant (m/t)	Cancelled & awaiting delivery (m/t)	Total On Warrant (m/t)	# of Warehouse keepers	Average Rent per metric ton per day (across Warehouse keepers)	Total Cancelled & awaiting delivery per location	Queue in Days (assuming metal split evenly per warehouse keeper)	Queue in Days (assuming metal held by 1 warehouse keeper)	Cost of Queue (assuming metal split evenly per warehouse keeper)	Cost of Queue (assuming metal held by 1 warehouse keeper)	Mid value of Warrants	Average FOT charge across Warehouse Keepers)	Estimated haulage cost to nearest HB Warehouse Location (not city of origin)	Average Freight cost (across users tendered) (per m/t)	Total Lower bound cost (m/t)	Total Higher bound cost (m/t)
Baltimore	-	4,650	4,650	7	0.41	15,075	2	11	0.81	4.46	7.50	36.43	Baltimore to Baltimore	9.74	54.48	58.13
Chicago	13,650	1,600	15,250	6	0.41	52,550	6	36	2.44	14.64	7.50	36.24	Chicago to Chicago	14.14	60.32	72.52
New Orleans	33,500	8,850	42,350	6	0.41	131,600	15	88	6.10	35.79	5.83	36.37	New Orleans to New Orleans	7.89	56.19	85.87

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The following table sets forth the average LME settlement prices, average locational premia and average physical prices of copper for warehouse locations in the United States, Europe, Shanghai and Singapore for (i) the calendar year ended December 31, 2010, (ii) the three-month period from January 1, 2011 to March 31, 2011 and (iii) the period from April 1, 2011 to June 15, 2011. The amounts in U.S. dollars refer to the price or premia per metric ton. The information set forth in this Annex was provided by the Valuation Agent or is calculated from information the Sponsor received from the Valuation Agent.

	Year Ended December 31, 2010	January 1 – March 31, 2011	April 1 – June 15, 2011
United States			
Average LME Settlement Price[1]	$7,509.91	$9,654.22	$9,170.10
Average Locational Premium[2]	$108.31	$111.10	$107.53
Average Physical Price[3]	$7,618.22	$9,765.32	$9,277.63
Average Locational Premium as a Percentage of Average Physical Price[4]	1.4217%	1.1377%	1.1590%
Europe			
Average LME Settlement Price[1]	$7,509.91	$9,654.22	$9,170.10
Average Locational Premium[2]	$71.46	$68.40	$67.69
Average Physical Price[3]	$7,581.37	$9,722.62	$9,237.79
Average Locational Premium as a Percentage of Average Physical Price[4]	0.9426%	0.7035%	0.7327%
Shanghai, China			
Average LME Settlement Price[1]	$7,509.91	$9,654.22	$9,170.10
Average Locational Premium[2]	$102.77	$38.60	$42.75
Average Physical Price[3]	$7,612.68	$9,692.82	$9,212.85
Average Locational Premium as a Percentage of Average Physical Price[4]	1.3500%	0.3982%	0.4640%
Singapore			
Average LME Settlement Price[1]	$7,509.91	$9,654.22	$9,170.10
Average Locational Premium[2]	$85.52	$69.20	$45.75
Average Physical Price[3]	$7,595.43	$9,723.42	$9,215.85
Average Locational Premium as a Percentage of Average Physical Price[4]	1.1259%	0.7117%	0.4964%

[1] The "Average LME Settlement Price" for each period is calculated by taking the average of the weekly LME Settlement Price published by the London Metals Exchange during the relevant period.
[2] The "Average Locational Premium" for each period is calculated by taking the average of the high and low locational premia for physical copper in the relevant region as published by the Valuation Agent for each week during such period. Such locational premia reflect the "in warehouse" premia, not including duties, for physical copper as described under the Incoterms® . The Incoterms® are an internationally recognized standard and are used worldwide in international and domestic contracts for the sale of goods.
[3] The "Average Physical Price" for each period is calculated by adding the Average LME Settlement Price and the Average Locational Premium for such period.
[4] The "Average Locational Premium as a Percentage of Average Physical Price" is a fraction, expressed as a percentage, where the numerator is the Average Locational Premium and the denominator is the Average Physical Price for the relevant period.

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The following table sets forth the average LME settlement prices, average locational premia and average physical prices of copper for each of the Permitted Warehouse Locations for the periods from June 16, 2011 to December 30, 2011, from January 3, 2012 to March 30, 2012, and April 1, 2012 to June 30, 2012. The amounts in U.S. dollars refer to the price or premia per metric ton. The information set forth in this Annex was provided by the Valuation Agent or has been calculated from information the Sponsor received from the Valuation Agent.

	June 16, 2011 – December 30, 2011	January 3, 2012 – March 30, 2012	April 1, 2012 – June 30, 2012
Baltimore			
Average LME Settlement Price[1]	$8,304.10	$8,310.06	$7869.23
Average Locational Premium[2]	$10.00	$7.54	$7.50
Average Physical Price[3]	$8,314.10	$8,317.61	$7876.73
Average Locational Premium as a Percentage of Average Physical Price[4]	0.1203%	0.0907%	0.0952%
New Orleans			
Average LME Settlement Price[1]	$8,304.10	$8,310.06	$7869.23
Average Locational Premium[2]	$10.00	$7.54	$7.50
Average Physical Price[3]	$8,314.10	$8,317.61	$7876.73
Average Locational Premium as a Percentage of Average Physical Price[4]	0.1203%	0.0907%	0.0952%
Rotterdam, Netherlands			
Average LME Settlement Price[1]	$8,304.10	$8,310.06	$7869.23
Average Locational Premium[2]	$69.11	$74.64	$77.63
Average Physical Price[3]	$8,373.21	$8,384.70	$7946.86
Average Locational Premium as a Percentage of Average Physical Price[4]	0.8253%	0.8901%	0.9769%
Shanghai, China			
Average LME Settlement Price[1]	$8,304.10	$8,310.06	$7869.23
Average Locational Premium[2]	$120.54	$87.46	53.84
Average Physical Price[3]	$8,424.64	$8,397.53	7923.07
Average Locational Premium as a Percentage of Average Physical Price[4]	1.4308%	1.0416%	0.6795%
Chicago, United States			
Average LME Settlement Price[1]	$8,304.10	$8,310.06	$7869.23
Average Locational Premium[2]	$10.00	$7.54	$7.50
Average Physical Price[3]	$8,314.10	$8,317.61	$7876.73

	June 16, 2011 – December 30, 2011	January 3, 2012 – March 30, 2012	April 1, 2012 – June 30, 2012
Average Locational Premium as a Percentage of Average Physical Price[4]	0.1203%	0.0907%	0.0952%
Gwangyang, Korea			
Average LME Settlement Price[1]	$8,304.10	$8,310.06	$7869.23
Average Locational Premium[2]	$52.87	$76.42	62.75
Average Physical Price[3]	$8,356.98	$8,386.48	7931.98
Average Locational Premium as a Percentage of Average Physical Price[4]	0.6327%	0.9112%	0.7911%
Busan, Korea			
Average LME Settlement Price[1]	$8,304.10	$8,310.06	$7869.23
Average Locational Premium[2]	$53.18	$76.42	62.75
Average Physical Price[3]	$8,357.28	$8,386.48	7931.98
Average Locational Premium as a Percentage of Average Physical Price[4]	0.6363%	0.9112%	0.7911%
Singapore			
Average LME Settlement Price[1]	$8,304.10	$8,310.06	$7869.23
Average Locational Premium[2]	$68.04	$79.09	57.16
Average Physical Price[3]	$8,372.14	$8,389.15	7926.39
Average Locational Premium as a Percentage of Average Physical Price[4]	0.8126%	0.9428%	0.7211%

[1] The "Average LME Settlement Price" for each period is calculated by taking the average of the daily LME Settlement Price published by the London Metals Exchange during the relevant period.
[2] The "Average Locational Premium" for each period is calculated by taking the locational premia for physical copper in the relevant region as published by the Valuation Agent for each day during such period. Such locational premia reflect the "in warehouse" premia not including duties, ffor physical copper as described under the Incoterms® . The Incoterms® are an internationally recognized standard and are used worldwide in international and domestic contracts for the sale of goods.
[3] The "Average Physical Price" for each period is calculated by adding the Average LME Settlement Price and the Average Locational Premium for such period.
[4] The "Average Locational Premium as a Percentage of Average Physical Price" is a fraction, expressed as a percentage, where the numerator is the Average Locational Premium and the denominator is the Average Physical Price for the relevant period.

Physical Metal ETVs

	SPDR Gold Trust	iShares Silver Trust	ETFS Palladium Trust	JPM XF Physical Copper Trust
Assets	Physical gold	Physical silver	Physical palladium	Physical copper
Investment Objective	To reflect the performance of the price of gold, less the trust's expenses.	To reflect the performance of the price of silver, less the trust's expenses.	To reflect the performance of the price of palladium, less the trust's expenses.	To reflect the performance of the price of copper, less the trust's expenses.
Location of Assets	London	London	London, Zurich	Global
Creation of Shares	Delivery of a creation unit amount of gold, *plus* a *pro rata* cash deposit.	Delivery of a creation unit amount of silver, with no *pro rata* cash deposit.	Delivery of a creation unit amount of palladium, *plus* a *pro rata* cash deposit.	Delivery of a creation unit amount of copper, with no *pro rata* cash deposit.
Redemption of Shares	Redemption of a creation unit amount of gold, *plus* a *pro rata* cash amount.	Redemption of a creation unit amount of silver, with no *pro rata* cash amount.	Redemption of a creation unit amount of palladium, *plus* a *pro rata* cash amount.	Redemption of a creation unit amount of copper, with no *pro rata* cash amount, taking into account the cheapest-to-deliver location selection protocol.
Creation Unit Amount	Initially 10,000 ounces of gold; decreases continuously over life of trust due to payment or accrual of fees and expenses.	Initially 500,000 ounces of silver; decreases continuously over life of trust due to payment or accrual of fees and expenses.	Initially 5,000 ounces of palladium; decreases continuously over life of trust due to payment or accrual of fees and expenses.	Initially 25 metric tons of copper; decreases continuously over life of trust due to payment or accrual of fees and expenses.
Redemption Settlement Period	Three business days following the redemption order date.	Three business days following the redemption order date.	Three, but no more than five, business days following the redemption order date.	Three business days following the redemption order date.
Valuation of Assets	Based on the price of an ounce of gold as set by London p.m. fix.	Based on the price of an ounce of silver as set by London fix.	Based on the price of an ounce of palladium as set by London p.m. fix.	Based on the settlement price per metric ton in U.S. dollars of Grade A copper as quoted on the LME, *plus* the weighted average locational premium.
Calculation of Net Asset Value	Based on the Valuation of Assets above; determined at the earlier of the London p.m. fix for the day or 12:00 p.m. New York time.	Based on the Valuation of Assets above; determined as promptly as practicable after 4:00 p.m. New York time.	Based on the Valuation of Assets above; determined as promptly as practicable after 4:00 p.m. New York time.	Based on the Valuation of Assets above; determined as promptly as practicable after 7:00 p.m. New York time.
Intraday Indicative Value per Share	Indicative price of gold *multiplied by* the quantity of gold underlying each share.	Indicative price of silver *multiplied* by the quantity of silver underlying each share.	Indicative price of palladium *multiplied by* the quantity of palladium underlying each share.	Liquidation IIV: indicative price of copper *plus* the weighted average locational premium, *multiplied* by the quantity of copper underlying each share. First-Out IIV: indicative price of copper in the cheapest-to-deliver location *plus* the locational premium for such location, *multiplied* by the quantity of copper underlying each share.

Metal Bulletin Research

Independent assessment of global copper stocks

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Appendix

EXECUTIVE SUMMARY -

- In total, we estimate that global refined copper stocks have ranged between 3.9 million metric tonnes and 4.4 million metric tonnes over the last two years or so, and stood at 4.09 million metric tonnes at the end of July 2012 (Exhibit A). These encompass exchange stocks, and off-exchange stocks held at producers, consumers, merchants and bonded warehouses, as well stock in transit or held by governments and investors.
- However, not all of this tonnage is liquid. We classify two levels of liquidity of refined copper stocks. We discuss our assumptions relating to this classification on pages 6 and 7 and present breakdowns of the data in Exhibit A. Most broadly, of the 4.09 million total, we estimate that 1.78 million metric tonnes can be considered to be liquid. However, this figure includes both LME brands and refined copper that is not LME-branded. More specifically, therefore, of the 1.78 million total for all liquid refined copper stocks, we estimate that 1.36 million metric tonnes are in the form of LME-brands. This is derived from our estimate that 68% of global production in 2011 was in the form of LME brands.
- Some 2.31 million metric tonnes of refined copper stocks from our overall 4.09 million total are therefore considered to be illiquid, in that they are tied up in inventories unavailable to the market (such as strategic government stockpiles), whether they are LME-branded or not.
- In addition to refined stocks, we estimate that global stocks of copper contained in concentrate are around 1.1 million metric tonnes, located primarily at smelters, ports, mines and in transit. Global stocks of copper contained in blister are around 2.1 million metric tonnes, most of which is blister in-process, while the remaining stock is mainly located at refineries and to a lesser extent at ports, in transit and at smelters (Exhibit B). Concentrate and blister stocks are considered to be illiquid, since they must be processed before they can be LME-deliverable.

ASSUMPTIONS AND DISCUSSION

1. - Refined Stocks

Please refer to data presented in Exhibit A, page 9, throughout this section.

Stocks at producers

Our first reference points for producer stocks were the ICSG and WBMS. For a selection of countries only, they report stocks held by producers in those countries. Our first task was to attempt to verify that these estimates are realistic. Our second task was to estimate producer stocks held in countries not covered by the ICSG and WBMS data sets, including notable absentees Russia, Spain, Kazakhstan, Mexico and Indonesia.

We contacted a number of major producers to discuss stock levels held by themselves and their peers. We understand that producers will typically carry stocks of cathode representing up to around 5% of annual production. Those carrying the highest inventory levels are the larger, well financed producers

and those geared towards export markets, especially Asian markets. By contrast, producers in Europe and North America carry very lower levels of cover since the global financial crisis, as it makes no sense for them to tie up working capital holding metal in inventory on site. Stock cover levels in these cases are typically less than 1% of annual production.

In general, these observations seem to fit with the producer stock levels reported by the ICSG and WBMS. For example, reported producer stocks in Japan, Chile and the Philippines are amongst the highest, at 5-7% of production, while reported producer stocks in the US, Canada, Poland and Bulgaria are among the lowest, at around 1% or less. In general, working stocks at producers represent 1-4% of production.

This verification process gave us confidence in most of the ICSG and WBMS reported producer stock estimates. If anything, they may be on the high side given pressures recently on working capital. The primary example is Germany, where we understand that refineries are carrying cover of around 1% of production, or less. This equates to around 7,000 metric tonnes, which is far below the WBMS estimate of 47,000 metric tonnes or 6-7% of production. So, for Germany we have disregarded the WBMS figure and use our own estimate. We also disregarded the estimates for Chinese producer stocks, put at a constant 80,000 metric tonnes by the ICSG and 170,000 metric tonnes by the WBMS. We suggest that, on the whole, Chinese producers typically run with stocks equivalent to around 5% of their annual production, which equates to around 290,000 metric tonnes nationally in 2012, though we have made an allowance for the spate of exports to LME warehouses earlier this year delivered against the LME backwardation that flared out at the time.

For the other significant copper-producing countries that the ICSG and WBMS have no producer stock data for, we have made our own estimates, based on reported stocks-to-production ratios for similar countries. For example, both the WBMS and the ICSG report producer stocks in the Philippines at around 8,000 metric tonnes, which is about 5% of annual production. So we have used the same 5% ratio to apply to Indonesia. We have made similar assumptions for Russia, Mexico, Spain and Kazakhstan, and made an allowance for remaining copper-producing countries in a separate ‘Others’ category.

Stocks at consumers

A key point to note at the outset is that consumers, particularly in the West, now operate on very low stock levels, preferring to pay higher premiums for just-in-time delivery in favour of tying up capital in holding stocks. Our conversations with consumers and traders suggest that working stocks at consumers are typically no more than around 1-2 weeks of consumption. This is consistent with estimates of consumer stocks reported by the ICSG and WBMS, where Germany and Italy, for example, are put at 7-8 days, though the US at 2 days seems rather low and France at three weeks (13,000 metric tonnes) and Japan at up to five weeks seem rather high.

There are no estimates from the ICSG or WBMS of consumer stocks in China. Our conversations reveal that stocks are currently around one week of consumption (150,000 metric tonnes), though were closer to two weeks at the start of the year (300,000 metric tonnes). Chinese consumers’ involvement in

restocking and destocking cycles is less pronounced than it was last decade, as large stockpiles in bonded warehouses act as a buffer.

For other copper-consuming countries, we have allowed an estimate of one week of consumption, and have included some estimates on a country basis (e.g. Russia, Spain, UAE) and made an allowance for remaining countries in an 'Others' category.

Stocks at merchants and in transit

An important category largely neglected by the ICSG and WBMS is copper held by merchants and in transit. Merchants are unwilling to disclose their holdings and activities, so this is a particularly grey area. However, our discussions with a broad cross section of industry participants repeatedly highlighted that the amount of refined copper tied up in transit or held by merchants at ports and elsewhere ready for transit at any given time is far larger than the amount held in exchanges. Indeed, consensus estimates put the global merchant/transit figure in excess of 500,000 metric tonnes, with many market participants estimating a figure nearer 1 million metric tonnes. We use a figure of around 800,000 metric tonnes.

Strategic stocks

Chinese SRB

Estimates from Chinese contacts put the current level of SRB stocks at between 800,000 metric tonnes and 1 million metric tonnes. We use a figure of 900,000 metric tonnes. Around 135,000 metric tonnes are believed to have been added in 2011, and there is speculation that the SRB is or will be active at the low price levels being seen in Q3 2012. We estimate that around 50,000 metric tonnes will be added this year.

Korean PPS

ICSG reports Korean government stocks from 2009 at 10,000 metric tonnes. This figure is more likely to represent the addition that year, not the absolute tonnage, as the PPS was reported in 2009 by MB as saying that it held around 40 days of consumption for all base metals and will build stockpiles gradually to two months of consumption. For copper, 40 days of Korean consumption in 2009 equates to 98,600 metric tonnes of cathode. Two months of consumption in 2010 and 2011 equals 150,700 metric tonnes and 137,900 metric tonnes respectively. We are not aware of any tenders in 2010, but believe 12,000 metric tonnes were added via tender in 2011 and another 5,000 metric tonnes in H1 2012. Tenders of 2,000-3,000 metric tonnes every quarter or so are expected to continue during the remainder of 2012 and through 2013. There is a plan to use a portion of these strategic copper stocks to back a physical ETF.

Bonded warehouse stocks

Cathode stocks in Chinese bonded warehouses have become the buffer stockpile for the Chinese industry. Metal stored here also include units for financing purposes.

Although tonnages are not officially reported, China's bonded stocks are a major focal point of the market, with sufficiently numerous estimates published by brokers and analysts to be able to report monthly bonded stock levels with a reasonable degree of accuracy.

Consensus estimates put Chinese bonded stocks at around 500,000-600,000 metric tonnes at the end of July, down from a high of 700,000-800,000 metric tonnes in March. In 2011, bonded warehouse stocks averaged around 300,000-400,000 metric tonnes.

Other refined stocks

We understand that some major hedge funds hold physical metal at times, and that there are private investors in China holding tonnages of physical metal for investment purposes. Estimates we have heard for China alone are as high as 200,000 metric tonnes, but most of this is held in bonded warehouses and so is covered in that category. Nevertheless, it seems prudent to make a modest allowance for investor stocks of around 100,000 metric tonnes, made up of 50,000 metric tonnes in non-bonded warehouses in China and 50,000 metric tonnes outside China. This figure tallies with estimates of off-warrant stocks believed to be held at LME warehouse locations around the world.

In total, we estimate that global refined copper stocks have ranged between 3.9 million metric tonnes and 4.4 million metric tonnes over the last two years or so, and stood at 4.09 million metric tonnes in July 2012 (Exhibit A).

The supply-demand balance approach

We have a reasonable degree of confidence in published copper supply-demand data stretching back into the 1990s. Prior to this, the opaque nature of industrial and stockpiling activity in the former Eastern Bloc countries made published data unreliable. Reported stocks ended 1994 at 769,000 metric tonnes. Rounding this up to 1.2 million metric tonnes seems reasonable in order to account for inevitable non-reported inventories. However, back then China only consumed around 1m tpy, or around 9% of global demand, so its stocks were relatively modest and the bonded/strategic/financing issues surrounding Chinese stocks today did not distort the global picture then as they do now. Therefore, taking 1.2 million metric tonnes as the starting point for global stocks at the start of 1995 and adding the annual surplus (subtracting the annual deficit) each year thereafter, results in an alternative estimate for global stocks.

By this method refined copper stocks stood at 3.7 million metric tonnes at the end of 2011. This is a similar order of magnitude to our estimate of 4.1 million metric tonnes noted above.

Liquidity of refined copper stocks

The first criterion of market liquidity is LME-deliverability. According to our estimates based on 2011 data, 68% of global refined copper production was in the form of LME brands. We believe that it reasonable to assume that a similar proportion of refined copper consumption is in the form of LME brands, and that this ratio can be also applied to most stock data to derive an estimate of the proportion of total refined copper stocks that exist in the form of LME branded cathode. We suggest that Chinese

bonded warehouse stocks may be an exception, and estimate that 80% of refined copper here is of LME-branded material. Therefore, using these assumptions and considering that 249,000 metric tonnes are already on LME warrant, of our global total of 4.09 million metric tonnes for refined copper stocks, **total LME-branded copper stocks on and off-warrant amount to 2.93 million metric tonnes.**

Assessing the liquidity of this 2.54 million metric tonnes is difficult and subjective. For example, LME on-warrant stocks should be highly liquid, but in reality the presence of dominant position holders, warehouse queues etc, mean that liquidity is compromised at times. Nevertheless, for the purpose of this study, we must consider LME stocks as theoretically liquid, as is LME-deliverable metal at other exchanges and in Chinese bonded warehouses. Any exchange or bonded LME-brands in stock that are not immediately liquid will in theory become more liquid as spreads and premiums respond to market forces and pry metal out of financing deals or the tight hands holding the stock. Similarly, LME-branded cathode held in investor stocks is considered to be reasonably liquid too.

For merchant/transit stocks, producer stocks and consumer stocks, there will be portions in each category that are more liquid than other portions that are relatively illiquid. Illiquid stocks in these categories concern metal tied up in the process chain or as financial collateral, or metal committed to short/medium term orders and contracts, or metal that is off-grade and therefore not immediately warrantable without further (re)processing and branding. Liquid stocks are mainly LME brands in buffer stocks or earmarked for longer term orders that in theory can be redirected to create near-term liquidity. We assume that 68% of producer and consumer stocks are LME brands and that at least 75% of this branded material is illiquid, while 50% of merchant/transit stocks are illiquid too. Naturally, strategic stocks are illiquid, as their purpose is solely to serve the local (Chinese and South Korean) markets at times of extreme shortage.

Overall, of the 4.09 million metric tonnes of cathode stocks in the global copper industry, we suggest that 2.93 million metric tonnes are LME-deliverable branded cathodes located in on-warrant and off-warrant stocks, though only 1.36 million metric tonnes can be considered to be liquid LME-deliverable brands. Including non-LME deliverable refined copper that is still considered to be liquid, we can also derive a total for overall liquid refined stocks comprising both LME brands and non-LME brands. This total is 1.78 million metric tonnes (Exhibit A).

2. Concentrate stocks

Please refer to data presented in Exhibit B, page 10, throughout this section.

Our concentrate stock analysis uses data for copper contained in concentrate, not gross weight of concentrate. Concentrate stocks are reported by the WBMS for Australia, Japan and Zambia only. The total has ranged between around 100,000 metric tonnes and 135,000 metric tonnes during the last two years. But in a global market which sees 12.6m tpy of copper produced in concentrate form, this is negligible coverage.

We have spoken to mining companies, smelting companies, concentrate traders and market analysts to build a more representative picture of global copper concentrate stocks. Stocks can be better broken down into those at mines, those at smelters and those at merchants or in transit.

Global copper concentrate production has seen very little growth in recent years, so in one sense stock levels have been fairly stable. However, they have been stable at low levels, due to the large number of unplanned supply disruptions experienced at a number of major mines around the world. Last year for example, total copper mine production fell about 1 million metric tonnes short of targets, due to strikes, accidents, equipment failures etc. Declining ore grades have also seen the copper mining industry underperform. This background has implications for miners and smelters in terms of their concentrate stocking strategies.

For the mining industry in general, the disruptions mean that buffer stocks of concentrate have been run down and mines have struggled to rebuild them. Moreover, with TC/RCs pushed to historically low levels, in large part due to miners' difficulties, there is little incentive for mines to hold back concentrate and every incentive to maximize the favourable market conditions by shipping as much concentrate to customers as possible instead of stockpiling.

For smelters, the opposite is largely true. In order to protect themselves from disruptions to raw material supply due to the high frequency of unplanned mine disruptions, smelters are tending to favour holding larger buffer stocks of concentrate, depending on financial variables, such as credit, exchange rate and arbitrage issues.

On balance, we understand that mines are operating at negligible concentrate stock levels. Consensus estimates put this at as little as 1-2 days of production. Two days for the global mining industry is merely 70,000 metric tonnes. Meanwhile, good practice in the smelting industry now is for plants to run with concentrate stocks on site equivalent to two weeks of consumption. Two weeks for the global industry amounts to a steady stock level globally of 500,000 metric tonnes.

As with smelters, it is in the interest of merchants to hold a decent stock of copper concentrate to take advantage of disruptions and shortages. Consensus estimates put concentrate stocks at merchants and in transit at 2-3 weeks of production.

In total, we estimate that global stocks of copper contained in concentrate are around 1.1 million metric tonnes, located primarily at smelters, ports, mines and in transit (Exhibit B).

In the context of market liquidity, concentrate stocks must be considered illiquid, as the material requires extensive processing before it can be LME-deliverable.

3. Blister stocks

Please refer to data presented in Exhibit B, page 10, throughout this section.

Copper contained in blister stocks is reported by the WBMS for Namibia, South Africa, Zambia, Canada, the US and Australia. But at between 73,000 metric tonnes and 93,000 metric tonnes over the last few years, reported blister stocks clearly do not reflect to full industry picture within a 13m tpy market. Again, we have contacted industry participants to determine a more representative estimate for global blister stocks.

Unlike concentrate, only a small proportion of blister produced is traded internationally because most smelters and refineries are integrated to some extent. This means that the largest category of blister stocks is metal in process. Blister stocks in process on average are equivalent to 10% of a smelter's output. So, globally, 1.3 million metric tonnes of copper is regularly tied up in blister stocks in process at smelters around the world. Because of the relative lack of international trade and general third-party trade in blister, merchant/transit stocks are relatively small. Consensus estimates put these at no more than 200,000 metric tonnes globally. As was the case at the mine-to-smelter stage of the supply chain, stocks in the smelter-to-refinery stage mostly reside at the downstream plant. So, smelter stocks of blister are typically a matter of days of consumption, while refinery stocks of blister are around two weeks' worth.

In total, we estimate that global stocks of copper contained in blister are around 2.1 million metric tonnes. Around 1.3 million metric tonnes of this total is blister in-process, while the remaining stock is mainly located at refineries and to a lesser extent at ports, in transit and at smelters (Exhibit B).

As with copper concentrate stocks, blister stocks must also be considered illiquid for the purposes of this study, as they require processing before they are LME-deliverable.

Exhibit A: Total refined copper stocks (000 metric tonnes)

COUNTRY	TYPE	SOURCE	2010 Dec	2011 Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	2012 Jan	Feb	Mar	Apr	May	Jun	Jul
Australia	Producer	ICSG, WBMS	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Belgium	Exchange	LME	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.4	0.4	0.4	0.4	0.4	0.3	0.2	0.7	1.6	0.1	0.1	0.1
Brazil	Producer	ICSG	16.2	16.2	16.2	16.2	16.2	16.2	16.2	16.2	16.2	16.2	16.2	16.2	16.2	16.2	10.7	10.7	10.7	10.7	10.7	10.7
	Consumer	MBR	24.3	27.8	27.8	24.3	24.3	24.3	24.3	24.3	24.3	24.3	24.3	24.3	24.3	24.3	29.8	29.8	29.8	29.8	29.8	29.8
Bulgaria	Producer	ICSG	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
Canada	Producer	ICSG, WBMS	8.8	6.7	6.4	8.7	8.3	7.0	6.0	4.9	5.0	3.5	3.7	3.7	3.7	3.7	2.2	3.0	2.2	4.5	4.5	4.5
Chile	Producer	ICSG	236.2	277.6	263.9	265.3	269.1	250.0	230.0	215.8	206.0	214.8	223.6	174.3	198.7	220.3	182.8	173.7	177.0	190.0	200.0	250.0
	Strategic (Codelco)	Codelco	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
China	Producer	MBR	260.0	260.0	260.0	260.0	260.0	260.0	260.0	260.0	260.0	260.0	260.0	260.0	260.0	285.0	290.0	265.0	240.0	140.0	180.0	200.0
	Consumer	MBR	280.0	250.0	200.0	150.0	200.0	250.0	300.0	300.0	300.0	330.0	350.0	300.0	280.0	300.0	250.0	200.0	250.0	200.0	180.0	150.0
	Exchange	SHFE	131.9	129.3	158.1	161.9	128.3	82.3	90.1	117.1	102.3	97.9	73.8	57.7	72.7	131.6	216.1	218.8	204.8	157.5	139.4	156.5
	Strategic (SRB)	MBR	765.0	765.0	765.0	765.0	765.0	765.0	765.0	765.0	765.0	800.0	850.0	900.0	900.0	900.0	900.0	900.0	900.0	900.0	900.0	950.0
	Bonded	MBR	375.0	400.0	500.0	650.0	550.0	400.0	325.0	350.0	300.0	250.0	200.0	300.0	325.0	400.0	550.0	750.0	600.0	550.0	500.0	550.0
	Private	MBR	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0
DRC	Producer	WBMS	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
France	Consumer	ICSG	11.0	14.0	15.0	16.0	16.0	15.0	14.0	13.0	13.0	13.0	13.0	13.0	13.0	11.0	13.0	13.0	13.0	13.0	13.0	13.0
	Exchange	LME	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Germany	Producer	MBR	8.0	10.0	12.0	10.0	10.0	8.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
	Merchant	WBMS	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7
	Consumer	WBMS	27.3	27.3	27.3	27.3	27.3	27.3	27.3	27.3	27.3	27.3	27.3	27.3	27.3	27.3	27.3	27.3	27.3	27.3	27.3	27.3
	Exchange	LME	10.0	8.9	7.8	7.8	8.3	8.5	8.3	7.2	7.9	7.8	7.8	7.8	7.8	2.5	1.1	1.1	0.4	0.4	0.3	0.2
India	Producer	ICSG, WBMS	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Indonesia	Producer	MBR	14.0	13.0	13.0	13.0	13.0	13.0	13.0	13.0	13.0	13.0	13.0	13.0	13.0	13.0	13.0	13.0	13.0	13.0	13.0	13.0
Italy	Consumer	ICSG	11.2	11.2	11.2	11.2	11.2	11.2	11.2	11.2	11.2	11.2	11.2	11.2	11.2	11.2	11.2	11.2	11.2	11.2	11.2	11.2
	Exchange	LME	3.6	3.5	3.2	3.7	6.3	6.0	6.8	6.3	6.5	7.3	9.0	10.3	8.4	6.8	11.3	7.8	8.2	1.6	1.0	1.5
Japan	Producer	ICSG, WBMS	89.9	114.8	122.1	89.5	97.6	105.2	109.9	111.7	117.1	119.8	107.9	91.6	97.3	114.8	96.7	88.4	87.3	62.5	70.0	90.0
	Consumer	ICSG, WBMS	10.8	6.6	0.4	10.4	3.3	1.5	7.0	12.9	18.1	15.6	15.2	10.4	7.0	6.6	5.4	4.7	1.3	1.3	3.3	5.0
	Merchant	ICSG, WBMS	9.5	5.8	8.2	3.5	10.2	13.9	16.7	14.5	11.4	12.0	9.6	5.9	16.7	5.8	12.7	9.2	6.7	8.3	8.3	8.3
Kazakhstan	Producer	MBR	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Malaysia	Exchange	LME	1.9	1.5	1.5	1.9	3.3	8.6	11.5	12.1	10.0	10.0	5.3	3.1	2.3	0.9	0.9	0.9	1.7	1.5	10.4	12.3
Mexico	Producer	MBR	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Netherlands	Exchange	LME	14.5	19.5	17.4	16.1	13.8	13.1	17.9	15.2	25.4	36.4	37.8	33.9	31.3	26.7	25.9	25.0	26.1	14.5	12.1	13.7
Peru	Producer	ICSG	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Philippines	Producer	ICSG, WBMS, MBR	8.3	8.3	8.3	8.3	8.3	8.3	8.3	8.3	8.3	8.3	8.3	8.3	8.3	6.0	0.0	0.0	0.0	0.0	0.0	2.0
Poland	Producer	WBMS	5.9	5.9	5.9	7.8	7.8	7.8	6.6	6.6	6.6	9.7	9.7	9.7	9.7	10.1	10.1	6.7	6.7	6.7	6.7	6.7
Russia	Producer	MBR	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0
	Consumer	MBR	9.0	10.0	10.0	10.0	11.0	11.0	11.0	12.0	12.0	12.0	13.0	13.0	13.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0
Scandinavia	Producer	ICSG	10.2	10.2	10.2	10.2	10.2	10.2	10.2	10.2	10.2	10.2	10.2	10.2	10.2	10.2	10.2	10.2	10.2	10.2	10.2	10.2
	Exchange	LME	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Singapore	Exchange	LME	11.2	14.4	20.5	32.2	34.7	43.9	45.2	44.5	43.5	41.4	38.8	16.6	9.9	9.8	10.3	11.4	5.3	11.0	16.0	15.9
South Africa	Producer	WBMS	0.1	0.6	0.1	0.5	0.8	0.8	2.4	4.6	2.5	1.2	1.5	2.1	0.4	0.8	0.6	1.0	0.1	0.3	2.3	2.3
South Korea	Producer	ICSG, WBMS	21.6	21.6	21.6	21.6	21.6	21.6	21.6	21.6	21.6	21.6	21.6	21.6	21.6	21.6	21.6	21.6	21.6	21.6	21.6	21.6
	Exchange	LME	49.5	66.8	95.1	115.7	139.3	136.6	123.7	117.8	114.2	108.7	57.6	41.7	25.0	15.5	10.6	13.8	28.3	58.2	84.8	83.1
	Strategic (PPS)	MBR	99.0	99.0	99.0	102.0	102.0	102.0	105.0	105.0	105.0	107.0	107.0	107.0	111.0	111.0	111.0	114.0	114.0	114.0	117.0	117.0
Spain	Producer	MBR	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
	Consumer	MBR	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
	Exchange	LME	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.0	1.0	0.8	0.1	0.0	0.0	0.0	0.0	0.0
UAE	Exchange	LME	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Consumer	MBR	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8
UK	Consumer	ICSG, WBMS	7.2	7.2	7.2	7.2	7.2	7.2	7.2	7.2	7.2	7.2	7.2	7.2	7.2	7.2	7.2	7.2	7.2	7.2	7.2	7.2
	Exchange	LME	0.3	0.2	0.1	0.1	0.4	0.6	0.2	1.7	1.3	0.4	0.6	0.7	0.1	0.1	0.2	0.1	0.4	0.1	0.4	0.6
US	Producer	ICSG	10.3	11.7	9.2	6.4	5.1	6.2	6.2	5.6	5.1	7.1	5.9	8.0	8.1	11.7	4.4	3.4	5.0	5.0	5.0	5.0
	Consumer	ICSG, WBMS	31.0	29.4	25.5	29.5	29.6	33.7	31.8	28.9	32.0	29.6	29.3	28.5	35.4	29.5	38.4	30.7	26.4	25.0	25.0	25.0
	Exchange	LME	284.5	276.9	272.5	259.2	255.6	251.5	247.7	258.9	254.0	261.0	266.1	271.1	285.5	266.0	231.7	196.9	169.5	143.5	131.3	121.2
	Exchange	COMEX	58.6	64.1	75.2	76.9	75.3	73.5	72.7	75.1	77.5	79.4	81.6	87.0	88.0	80.8	83.1	78.5	69.0	54.4	48.4	43.7
Zambia	Producer	ICSG	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0
Other	Producer	MBR	20.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0
	Consumer	MBR	114.0	111.0	111.0	111.0	111.0	111.0	111.0	111.0	111.0	111.0	111.0	111.0	111.0	108.0	108.0	108.0	108.0	108.0	108.0	108.0
	Transit/Merchant	MBR	780.0	800.0	800.0	800.0	800.0	800.0	800.0	800.0	800.0	800.0	800.0	800.0	800.0	800.0	800.0	800.0	800.0	800.0	800.0	800.0
	Other off-exchange	MBR	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0
TOTALS																						
	Producer		**773**	**842**	**834**	**803**	**813**	**800**	**783**	**771**	**764**	**778**	**774**	**711**	**739**	**806**	**735**	**689**	**666**	**557**	**616**	**708**
	Consumer		**536**	**504**	**445**	**407**	**451**	**502**	**555**	**558**	**566**	**591**	**611**	**556**	**539**	**549**	**514**	**456**	**498**	**447**	**429**	**400**
	Merchant/Transit		**795**	**812**	**814**	**809**	**816**	**820**	**822**	**820**	**817**	**818**	**815**	**812**	**822**	**812**	**818**	**815**	**812**	**814**	**814**	**814**
	Exchange		**568**	**587**	**654**	**678**	**667**	**627**	**626**	**658**	**644**	**652**	**580**	**531**	**532**	**542**	**591**	**555**	**515**	**443**	**444**	**449**
	Bonded		**375**	**400**	**500**	**650**	**550**	**400**	**325**	**350**	**300**	**250**	**200**	**300**	**325**	**400**	**550**	**750**	**600**	**550**	**500**	**550**
	Strategic		**864**	**864**	**864**	**867**	**867**	**867**	**870**	**870**	**870**	**907**	**957**	**1,007**	**1,011**	**1,011**	**1,011**	**1,014**	**1,014**	**1,014**	**1,017**	**1,067**
	Other		**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**
	Total refined copper stocks		**4,011**	**4,109**	**4,211**	**4,313**	**4,264**	**4,115**	**4,081**	**4,127**	**4,061**	**4,096**	**4,037**	**4,017**	**4,069**	**4,219**	**4,320**	**4,378**	**4,206**	**3,924**	**3,920**	**4,088**
LIQUIDITY																						
	LME stocks on warrant		378	394	421	439	464	471	464	466	465	475	425	387	372	330	293	258	242	231	257	249
	LME-branded at producers		525	572	567	546	553	544	532	524	519	529	526	483	503	548	500	469	453	379	419	482
	LME-branded at consumers		364	343	303	277	306	341	377	379	385	402	416	378	367	373	350	310	339	304	291	272
	LME-branded at merchant/transit		541	552	553	550	555	557	559	558	556	556	554	552	559	552	557	554	552	554	554	554
	LME-branded at other exchanges		129	131	158	162	138	106	110	130	122	120	105	98	109	144	203	202	186	144	127	136
	LME-branded at bonded		300	320	400	520	440	320	260	280	240	200	160	240	260	320	440	600	480	440	400	440
	LME-branded at strategic		588	588	588	590	590	590	592	592	592	617	651	685	687	687	687	690	690	690	692	726
	LME-branded at other		68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68
	Total LME-branded on/off warrant		**2,893**	**2,968**	**3,058**	**3,152**	**3,114**	**2,997**	**2,962**	**2,997**	**2,946**	**2,967**	**2,906**	**2,891**	**2,925**	**3,022**	**3,097**	**3,150**	**3,009**	**2,808**	**2,808**	**2,926**
	Total non-LME-branded		1,117	1,141	1,153	1,162	1,150	1,118	1,118	1,129	1,115	1,128	1,132	1,125	1,144	1,197	1,223	1,229	1,196	1,116	1,112	1,163
	Total liquid refined stocks		**1,768**	**1,830**	**1,980**	**2,135**	**2,041**	**1,862**	**1,797**	**1,850**	**1,785**	**1,753**	**1,634**	**1,654**	**1,688**	**1,786**	**1,963**	**2,098**	**1,912**	**1,751**	**1,712**	**1,783**
	of which:																					
	LME-brand stocks		1,368	1,418	1,541	1,670	1,603	1,465	1,409	1,449	1,399	1,374	1,271	1,284	1,306	1,368	1,494	1,600	1,450	1,330	1,307	1,358
	Non LME-brand stocks		400	411	439	465	439	397	388	401	387	379	363	369	382	418	468	499	463	420	406	425
	Total illiquid refined stocks		**2,243**	**2,279**	**2,230**	**2,179**	**2,223**	**2,253**	**2,284**	**2,276**	**2,276**	**2,342**	**2,403**	**2,363**	**2,381**	**2,433**	**2,357**	**2,280**	**2,293**	**2,174**	**2,208**	**2,305**

Exhibit B: Copper in concentrate and blister stocks (000 metric tonnes)

COUNTRY	SOURCE	2010	2011												2012					
		Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
CONCENTRATE																				
Zambia	WBMS	11.9	11.9	11.9	11.9	11.9	11.9	11.9	11.9	11.9	11.9	11.9	11.9	23.7	11.9	11.9	11.9	11.9	11.9	11.9
Japan	WBMS	74.8	60.5	60.5	55.3	64.0	62.3	63.2	43.7	43.7	32.0	71.1	62.2	53.3	59.0	61.0	61.2	42.6	82.0	82.0
Australia	WBMS	40.6	40.6	40.6	40.6	40.6	40.6	40.6	40.6	40.6	40.6	40.6	40.6	40.6	40.6	40.6	40.6	40.6	40.6	40.6
Other (mines)	MBR	70.0	70.0	70.0	70.0	50.0	40.0	30.0	50.0	60.0	70.0	60.0	50.0	50.0	50.0	60.0	70.0	70.0	70.0	75.0
Other (smelters)	MBR	400.0	400.0	400.0	400.0	400.0	400.0	400.0	400.0	400.0	400.0	400.0	400.0	400.0	400.0	400.0	400.0	400.0	400.0	400.0
Other (merchant/transit)	MBR	500.0	500.0	500.0	500.0	500.0	500.0	500.0	500.0	500.0	500.0	500.0	500.0	500.0	500.0	500.0	500.0	500.0	500.0	500.0
TOTAL CONCS		**1,097**	**1,083**	**1,083**	**1,078**	**1,067**	**1,055**	**1,046**	**1,046**	**1,056**	**1,055**	**1,084**	**1,065**	**1,068**	**1,062**	**1,074**	**1,084**	**1,065**	**1,105**	**1,110**
BLISTER																				
Namibia	WBMS	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
South Africa	WBMS	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
Zambia	WBMS	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	42.1	21.0	21.0	21.0	21.0	21.0	21.0
Canada	WBMS	27.3	26.3	26.6	26.8	26.3	26.2	26.2	26.3	26.3	26.6	27.0	26.2	26.4	26.8	26.1	26.4	27.2	26.7	26.2
US	WBMS	26.3	23.4	23.4	24.7	24.7	27.2	20.1	20.1	20.1	21.4	21.4	21.4	12.7	14.5	14.5	16.5	19.2	19.2	19.2
Australia	WBMS	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.4
Other (smelters)	MBR	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0
Other (in process)	MBR	1,300.0	1,280.0	1,280.0	1,280.0	1,280.0	1,280.0	1,280.0	1,280.0	1,280.0	1,280.0	1,280.0	1,280.0	1,280.0	1,310.0	1,310.0	1,310.0	1,310.0	1,310.0	1,310.0
Other (refineries)	MBR	500.0	500.0	500.0	500.0	500.0	500.0	500.0	500.0	500.0	500.0	500.0	500.0	500.0	500.0	500.0	500.0	500.0	500.0	500.0
Other (merchant/transit)	MBR	180.0	190.0	190.0	190.0	190.0	190.0	190.0	190.0	190.0	190.0	190.0	190.0	190.0	175.0	175.0	175.0	175.0	175.0	175.0
TOTAL BLISTER		**2,106**	**2,092**	**2,093**	**2,094**	**2,094**	**2,096**	**2,089**	**2,089**	**2,089**	**2,091**	**2,091**	**2,090**	**2,103**	**2,099**	**2,098**	**2,100**	**2,104**	**2,103**	**2,103**
TOTAL CONCS + BLISTER		**3,203**	**3,175**	**3,176**	**3,172**	**3,160**	**3,151**	**3,135**	**3,135**	**3,145**	**3,145**	**3,175**	**3,155**	**3,170**	**3,160**	**3,172**	**3,184**	**3,169**	**3,208**	**3,212**

Exchange Copper Stocks (metric tonnes)

	LME	Comex	SHFE	Total	LME cash price	
					c/lb	$/tonne
Jan05	46,350	41,564	19,463	107,377	143.79	3,170
Feb05	52,550	42,469	44,225	139,244	147.59	3,254
Mar05	45,275	39,324	21,463	106,062	153.30	3,380
Apr05	61,000	27,084	17,265	105,349	153.97	3,394
May05	44,325	19,985	28,411	92,721	147.38	3,249
Jun05	28,875	13,877	29,762	72,514	159.85	3,524
Jul05	31,525	9,972	34,387	75,884	163.94	3,614
Aug05	67,950	8,424	42,899	119,273	172.26	3,798
Sep05	79,950	6,533	29,452	115,935	174.99	3,858
Oct05	65,025	3,347	47,350	115,722	184.15	4,060
Nov05	72,600	3,339	74,160	150,099	193.66	4,269
Dec05	92,225	6,181	57,844	156,250	207.60	4,577
Jan06	96,000	10,571	51,343	157,914	214.75	4,734
Feb06	115,275	28,146	56,154	199,575	226.00	4,982
Mar06	120,675	32,009	32,097	184,781	231.47	5,103
Apr06	117,550	15,126	31,117	163,793	289.50	6,382
May06	111,100	8,658	45,320	165,078	365.69	8,062
Jun06	93,500	7,415	60,709	161,624	326.48	7,198
Jul06	100,575	6,129	49,553	156,257	349.78	7,711
Aug06	125,400	11,228	49,617	186,245	349.05	7,695
Sep06	116,875	18,470	33,549	168,894	344.83	7,602
Oct06	135,175	21,086	34,796	191,057	340.22	7,500
Nov06	156,725	28,691	27,141	212,557	318.83	7,029
Dec06	190,575	30,915	31,300	252,790	302.78	6,675
Jan07	216,100	32,630	24,071	272,801	257.18	5,670
Feb07	205,400	33,560	31,007	269,967	257.48	5,676
Mar07	181,075	33,055	59,364	273,494	292.68	6,452
Apr07	156,550	30,072	67,820	254,442	352.29	7,767
May07	127,450	24,947	99,027	251,424	348.46	7,682
Jun07	112,600	20,069	90,617	223,286	339.11	7,476
Jul07	103,475	19,848	90,089	213,412	361.70	7,974
Aug07	139,100	18,783	66,793	224,676	340.81	7,514
Sep07	130,675	18,248	47,791	196,714	346.95	7,649
Oct07	167,000	17,753	56,931	241,684	363.26	8,008
Nov07	189,500	16,312	34,438	240,250	316.01	6,967
Dec07	198,925	13,816	25,597	238,338	298.79	6,587
Jan08	177,800	12,680	18,158	208,638	320.29	7,061
Feb08	141,375	11,866	48,885	202,126	357.79	7,888
Mar08	112,575	10,940	55,607	179,122	382.81	8,439
Apr08	110,075	9,822	49,417	169,314	393.93	8,685
May08	123,950	10,003	44,554	178,507	380.23	8,383
Jun08	122,350	10,015	32,401	164,766	374.70	8,261
Jul08	144,650	4,175	41,090	189,915	381.66	8,414
Aug08	173,725	4,890	17,625	196,240	346.25	7,633
Sep08	199,050	9,000	16,130	224,180	317.31	6,995

Exchange Copper Stocks (metric tonnes)

	LME	Comex	SHFE	Total	LME cash price	
					c/lb	$/tonne
Oct08	237,925	8,973	24,788	271,686	223.43	4,926
Nov08	291,200	15,222	16,335	322,757	168.61	3,717
Dec08	340,550	31,310	15,326	387,186	140.18	3,090
Jan09	491,200	36,505	16,567	544,272	146.10	3,221
Feb09	536,675	41,099	28,332	606,106	150.36	3,315
Mar09	501,775	42,162	25,181	569,118	170.09	3,750
Apr09	398,700	43,595	15,051	457,346	199.89	4,407
May09	311,975	50,497	30,217	392,689	207.23	4,569
Jun09	265,725	54,212	56,088	376,025	227.43	5,014
Jul09	282,125	49,855	51,135	383,115	236.58	5,216
Aug09	299,950	48,270	86,625	434,845	279.66	6,165
Sep09	346,050	48,518	98,689	493,257	281.07	6,197
Oct09	372,175	56,198	102,835	531,208	285.23	6,288
Nov09	441,000	77,736	101,277	620,013	302.91	6,678
Dec09	502,400	89,975	95,315	687,690	316.69	6,982
Jan10	543,525	94,001	101,210	738,736	333.49	7,352
Feb10	551,250	93,674	149,478	794,402	310.62	6,848
Mar10	512,450	91,742	155,465	759,657	338.51	7,463
Apr10	496,975	91,761	189,441	778,177	351.31	7,745
May10	475,575	92,342	157,698	725,615	310.16	6,838
Jun10	449,425	92,463	123,929	665,817	293.53	6,471
Jul10	413,075	91,377	104,507	608,959	303.40	6,689
Aug10	398,525	86,495	110,582	595,602	330.24	7,280
Sep10	373,800	77,003	87,447	538,250	349.69	7,709
Oct10	367,575	68,128	106,091	541,794	376.14	8,292
Nov10	354,850	65,059	122,612	542,521	384.19	8,470
Dec10	377,675	59,829	131,891	569,395	414.92	9,147
Jan11	393,925	63,746	129,250	586,921	433.44	9,556
Feb11	420,275	75,552	158,101	653,928	447.59	9,868
Mar11	438,850	76,860	161,916	677,626	432.31	9,531
Apr11	463,800	75,445	128,268	667,513	430.16	9,483
May11	470,850	73,491	82,309	626,650	404.93	8,927
Jun11	463,450	72,759	90,089	626,298	410.30	9,045
Jul11	466,025	75,072	117,067	658,164	436.33	9,619
Aug11	464,625	77,546	102,258	644,429	410.11	9,041
Sep11	474,950	79,448	97,911	652,309	377.16	8,315
Oct11	424,750	81,570	73,768	580,088	333.22	7,346
Nov11	399,625	79,442	57,655	536,722	342.55	7,552
Dec11	371,575	79,800	72,712	524,087	343.07	7,563
Jan12	329,300	80000	131,645	540,945	364.85	8,043
Feb12	292,250	83124	216,086	591,460	382.05	8,423
Mar12	257,550	78,492	218,814	554,856	383.61	8,457
Apr12	241,550	68,950	204,762	515,262	373.68	8,238
May12	223,500	54,206	157,489	435,195	359.25	7,920
Jun12	256,300	48,385	139,442	444,127	336.57	7,420