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# Commodity ETFs in the Japanese Stock Exchanges

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## **Abstract**

The “Financial Big Bang” reforms during the latter half of the 1990s substantially transformed the Japanese financial system, but despite this, the level of risky assets that Japanese households have in their portfolio has not increased. One reason for this is the lack of knowledge necessary to invest in risky assets, such as stocks. Therefore, the Japanese government and financial industry have developed collective investment schemes such as investment trusts, which are an effective way to hold risky assets for retail investors who lack sophisticated investment knowledge. This paper analyzes commodity investment trusts and commodity ETFs as a method for investing in commodities.

## **1. Introduction**

The “Financial Big Bang” reforms during the latter half of the 1990s substantially transformed the Japanese financial system and created an environment that made it easier for individual investors to put their money into risky assets. However, bank deposits continue to form the core of Japanese households’ financial asset holdings. Several surveys have found that one reason people remain reluctant to invest is a lack of relevant knowledge.

As such, there is demand for a simpler, easy-to-understand investment vehicle; one auspicious option is ETF and other investment trusts. In fact, due to rapid

development of the environment for investment trusts, net asset value of investment trust has increased from 50 trillion to 80 trillion yen during the seven years from the end of 1999 to the end of 2007.

However, despite the fact that use of commodity investments in financial asset management has expanded on a global level, their use in Japan remains extremely subdued. Growth in commodity funds, which used to be expected high growth as a collective investment scheme for commodities, has been sluggish, with assets under management failing to reach only 15 billion yen.

Many experts now have high expectations for investment trusts and ETFs as a new way to invest in commodities, and the purpose of this paper is to analyze the current state of commodity ETFs and investment trusts linked to commodities (“Commodity investment trusts” for simplicity's sake).

## **2. Investment Trusts and Commodity Investment Trust as Means for Investment by Individuals**

### **(1) Commodity Investment Trusts**

Due to restrictions in Japanese law, investment trusts are not allowed to purchase commodities or commodity futures directly. Commodity investment trust is a kind of investment trust, so they are subject to the restriction. However, there is a loophole. Namely, commodity investment trust can conduct indirect commodity investment through purchasing securities linked to commodities.

Using this loophole, the Daiwa Commodity Index Fund (aka the Jim Rogers World Adventure) launched on December 10, 2004. Although it is out of reach for most individual investors since the minimum investment is 5 million yen, its net asset value grew to 12.1 billion yen by July 2006. However, the base value declined with the plummet in the commodities market in 2008 and has been sluggish ever since; moreover, with five-year returns deeply in the red as of October 2010, the fund has failed to deliver the expected investment results.

As of October 2010, the total assets of all major commodity investment trusts in

Japan (24 in total) were 68 billion yen. The largest, the Daiwa Rogers International Commodity Fund launched on April 23, 2009, has 22.6 billion yen under management and is the only investment trust with assets over 10 billion yen. Out of the 2154 investment trusts in the Morningstar database of funds that are at least one year old, the scale of assets under management of this fund is ranked 278th.

## (2) Commodity Funds

In Japan, commodity transactions are mainly regulated by the Ministry of Economy, Trade and Industry and the Ministry of Agriculture, Forestry and Fisheries. Therefore, collective investment schemes linked to commodity transaction come under the jurisdiction of these Ministries. To differentiate investment trusts which the Financial Supervisory Agency is to regulate, collective investment schemes linked to commodity transaction is called “Commodity Funds.” Unfortunately, commodity funds have been stagnant.

In 2000, the total number of commodity funds was 99 with 236.4 billion yen under management, amounting to about 2.4 billion yen per fund<sup>1</sup>. However, unlike commodity investment trusts, commodity funds’ assets under management have fallen constantly, with the number of funds as of the end of March 2010 dropping to 20 and assets under management declining to 15 billion yen. Over the past several years, almost no new commodity funds have been started, and total assets under management have fallen as funds sold in the past have been redeemed.

## 3. Commodity Investment through Commodity ETFs

### (1) Pre-Global Financial Crisis Period

Up until 2007, FSA’s regulations limited ETFs listed on domestic exchanges to those that moved in tandem with pre-determined indices such as the Nikkei average,

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<sup>1</sup> The year-end peak was 318.4 billion yen at the end of March, 1998. At this point there were 137 funds under management.

and ETFs linked to commodities such as gold or crude oil were not permitted.

The Osaka Securities Exchange succeeded in listing an ETF linked to gold prices in August 2007. This ETF was an investment trust that incorporated bonds (so-called linked bonds) that fluctuated with movements in prices in the London gold market. Although it was legally a security ETF, it was effectively the first domestic commodity ETF in Japan.

Nearly one year later in June 2008, the Tokyo Stock Exchange listed an ETF backed by physical gold assets, which was a dual listing of a gold ETF previously listed on the New York Stock Exchange managed by U.S. asset management heavyweight State Street Global Advisors.

## **(2) Changes to Environment Surrounding ETFs after Global Financial Crisis**

With the implementation of an extremely expansionary monetary policy employed by central banks in many nations to address increasing uncertainty about the economy, concerns about inflation also arose and investor demand for safe assets such as gold and other commodities rose, which resulted in a growth in ETFs.

Second, many index-based ETFs used linked bonds. However, the global financial crisis highlighted the fact that in the case of bond-based ETFs, the credit risk of the bond issuer and liquidity risk of the bonds cannot be ignored<sup>2</sup>. As a result, ETFs directly linked to the physical assets became more preferable.

Third, simple products became attractive. A news article of Nihon Keizai Shimbun on June 23, 2009, pointed out that “the main commodity indices incorporate around 20 to 30 listed products. Investors are questioning whether that many commodities are necessary as a strategy against inflation,” and further commented that “one reason that the Deutsche Bank Liquid Commodities Index has been resilient is its conciseness, with components limited to six representative commodities such as crude oil, gold, and wheat.

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<sup>2</sup> For example, calculation of the base price of the DJ/AIG commodities index (currently the DJ/UBS commodities index), a leading domestic public fund, was temporarily not possible during the management crisis at AIG.

### **(3) Listing of New Types of Commodity ETFs**

In August 2009, ETF Securities, one of the world's largest ETF issuers, listed a total of five ETFs on the TSE: gold, silver, platinum, palladium, and an ETF linked to a price comprised of these four elements. Prices move in tandem with those on the London spot market, but holders of ETFs do not have the right to exchange their shares for gold bullion.

Also in the same month, Japan's first crude oil ETF was listed on the Osaka Securities Exchange, which uses West Texas Intermediate (WTI) crude oil prices as an indicator.

In February 2010, two ETFs linked to the Tokyo Commodity Exchange's gold and platinum indices, the Mizuho Gold ETF and the NEXT FUNDS Nikkei-TOCOM Platinum Index Linked ETF, were listed on the Osaka Securities Exchange.

In March 2010, ETF Securities listed a batch of 14 commodity-linked issues including grains, copper, and natural gas at once.

In July 2010, Mitsubishi UFJ Trust and Banking Corporation listed several precious metal ETFs (gold, silver, platinum, and palladium) backed by physical assets on the Tokyo Stock Exchange. The physical asset-backed precious metal ETFs that were previously listed could not be effectively exchanged for said asset as it was located overseas. However, a significant characteristic of this ETF was that it was the first precious metal ETF backed by physical assets kept within the country, and as such, could actually be exchanged for the asset.

## **4. Assessment of Current Commodity ETFs**

### **(1) Summary of Commodity ETFs as of Fall 2010**

As of present (September 7<sup>th</sup>, 2010), there are 106 ETFs listed on the Tokyo Stock Exchange or Osaka Securities Exchange, 30 of which are commodity ETFs<sup>3</sup>. Among those commodity ETFs, those linked to gold are most numerous, with five being

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<sup>3</sup> We obtained basic data from Yahoo! Finance.

listed. SPDR Gold Shares, which is listed on five exchanges around the world including the New York Stock Exchange, is a large-scale product that makes up 80% of the world's gold ETFs.

Management fees for commodity ETFs range from 0.39% to 0.85%, which is significantly less expensive than the average of 1.46% charged for the commodity investment trusts.

The most actively traded commodity ETFs are those based on gold. Ranked by 2009 trading value, the gold-linked ETF (listed on the OSE) ranks 7 amongst all domestic ETFs. However, compared to the average trading value of 218.6 billion yen for stocks listed on the first section of the TSE, this ETF's yearly trading value of 84.8 billion yen is significantly smaller. Considering commodity ETFs in foreign markets, there is still considerable room for growth for commodity ETFs in Japan.

## (2) ETFs Transaction

This section looks in detail at trading in the 30 commodity ETFs in existence as of the end of July 2010.

Price and trading volume data were obtained through Yahoo Finance on all ETFs for every trading day since listing. A certain length of data is necessary to perform an effective analysis, but only three commodity ETFs were listed before the end of 2008.

First, this paper examines the first commodity ETF linked to gold prices (securities code 1328). Trading in commodity ETFs is generally thin, but as stated before, gold-linked listed funds are traded relatively heavily. In fact, shown in Figure 1, this fund was traded on all 726 trading days from August 10, 2007 to July 30, 2010, with a cumulative trading volume of 94.24 million shares (units) and daily trading volume of around 130,000 shares (currently one share is around 3,000 yen).

The subsequent long-running SPDR Gold Shares was traded on all 510 trading days since June 30, 2008, with cumulative trading volume of 13.85 million shares and daily trading volume of around 27,000 shares (currently one share is around 10,000 yen).

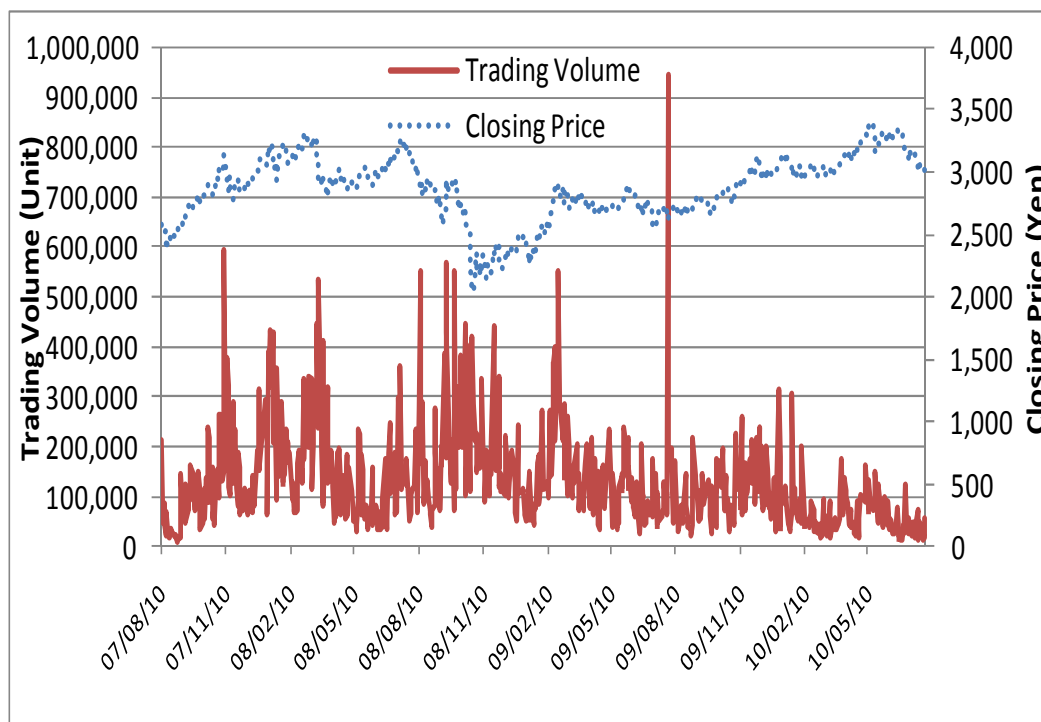
Third is the EZ ETFS & PGSCI, which began trading on October 22, 2008. This

was also traded for all 432 trading days, with cumulative trading volume of 820,000 shares and daily trading volume of around 1,900 shares (currently one share is around 3,500 yen).

These three long-runners have seen a decent amount of trading, but volumes for newly listed ETFs remain light, as shown in Table 1. In fact several ETFs have seen almost no trading at all, with daily trading value below 100,000 yen. Many issues have only recently been listed, so there is still potential for trading volumes to pick up as people are recognizing them in the future, but currently there is not a very high probability of this happening soon.

Figure 1

Trading volumes and closing prices for the gold-linked ETF



(Note) This graph shows The Listed Investment Trust Linked to Gold Prices (security code: 1328).



Table 1

## Basic statistics of all commodity ETFs in Japan

	Security codes	Initial trading date	Trading days ratio	Average daily trading volume	Average daily trading value (10 thousands yen)
1	<a href="#">1326</a>	2008/6/30	100.0%	27,160	28,980
2	<a href="#">1327</a>	2008/10/22	100.0%	1,898	655
3	<a href="#">1540</a>	2010/7/2	100.0%	27,916	9,910
4	<a href="#">1541</a>	2010/7/2	100.0%	1,367	617
5	<a href="#">1542</a>	2010/7/2	100.0%	2,379	1,425
6	<a href="#">1543</a>	2010/7/2	95.0%	71	110
7	<a href="#">1672</a>	2009/8/25	94.3%	388	419
8	<a href="#">1673</a>	2009/8/24	97.8%	3,045	545
9	<a href="#">1674</a>	2009/8/24	91.2%	243	330
10	<a href="#">1675</a>	2009/8/25	83.3%	660	308
11	<a href="#">1676</a>	2009/8/24	49.1%	16	14
12	<a href="#">1684</a>	2009/3/19	71.1%	141	17
13	<a href="#">1685</a>	2009/3/19	36.7%	98	9
14	<a href="#">1686</a>	2009/3/19	51.1%	59	9
15	<a href="#">1687</a>	2009/3/19	86.7%	1,171	72
16	<a href="#">1688</a>	2010/3/24	76.1%	1,193	55
17	<a href="#">1689</a>	2010/3/19	91.1%	65,907	185
18	<a href="#">1690</a>	2010/3/19	74.4%	676	138
19	<a href="#">1691</a>	2010/3/19	43.3%	71	18
20	<a href="#">1692</a>	2010/3/19	52.2%	327	15
21	<a href="#">1693</a>	2010/3/19	80.0%	195	67
22	<a href="#">1694</a>	2010/3/19	68.9%	170	39
23	<a href="#">1695</a>	2010/3/19	94.4%	9,372	184
24	<a href="#">1696</a>	2010/3/19	84.4%	6,656	86
25	<a href="#">1697</a>	2010/3/19	68.9%	244	36
26	<a href="#">1699</a>	2010/5/17	100.0%	3,461	293
27	<a href="#">1328</a>	2007/8/10	100.0%	129,805	41,083
28	<a href="#">1671</a>	2009/8/3	100.0%	15,554	7,901
29	<a href="#">1682</a>	2010/2/15	99.1%	30,026	790
30	<a href="#">1683</a>	2010/2/15	97.4%	1,198	413

(Notes)

- 1) Trading days ratio = numbers of days that transaction actually are made / numbers of business days since the initial transaction date
- 2) These statistics are as of July 30, 2010.

#### (4) Relationship between Gold ETFs and Gold Trading on the Tokyo Commodity Exchange

The issue of whether trading in gold ETFs diverts trading away from gold futures on commodities futures markets or if such trading performs a supplemental function is critical. The correlation coefficients between gold-linked ETF trading volume and trading volume in gold futures (and mini-gold futures) on the Tokyo Commodity Exchange are calculated in this section. The gold-linked ETF examined was listed on August 10, 2007, so the time frame used was September 2007 to July 2010, for which statistics on both were available. The analysis used monthly trading volume data.

Our empirical test shows that there was a significantly high positive correlation between the two, with the ETF having a positive correlation coefficient of 0.453 with gold futures and 0.405 with mini gold futures. Deducing the cause and effect is difficult with this level of sample data, but at the very least, there is no evidence of a trend in which both products compete with each other, with trading in gold futures on the Tokyo Commodity Exchange falling as trading in gold ETFs rises<sup>4</sup>.

### 5. Conclusion

The author believes that rather than direct trading on commodities futures markets, using a group-based investment scheme, such as ETFs, is more preferable as a method for individuals to build their wealth. Despite this, commodity funds, which held a lot of potential as a group-based scheme for investment in commodities, have not been utilized to a great extent. Commodity-based investment trusts grew steadily until the global financial crisis, after which asset values plummeted. However, outstanding amounts eventually stabilized after the drop, and commodity-based funds are now well established.

Many have high expectations for commodity ETFs, which have experienced

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<sup>4</sup> As the correlation between gold futures and mini gold futures on the Tokyo Commodities Exchange was -0.248, these two products may have been competing with each other during the same period,.

rapid diversification in recent years. The types of ETFs available have grown considerably more diverse as regulations have been eased, but investor participation remains limited, with trading in many newly listed ETFs in particular continuing to be extremely subdued. To make more investors recognize these products is an important challenge in making these valuable diverse investment opportunities to be widely utilized. Many have pointed out that commodity ETFs are difficult for salespersons of securities companies to proactively sell due to a lack of a lack of commodities knowledge and relatively smaller sales fees. To learn from the failures of commodity funds, an enhanced approach on the sell side is necessary.

Finally, there are several research issues that we have to analyze in the future. First, data analysis is still inadequate as commodity ETFs have only recently arrived on the scene. Future analysis is necessary with more data accumulation; for example, it would be fascinating to study the relationship between commodity ETF and commodity futures trading on a daily or more frequent basis. Second, the assets that ETFs are linked to have become more diversified, but the differences in price formation stemming from the way that the ETFs are linked to these assets are also interesting. For example, there are differences in the nature of the various gold-linked ETFs; there are those that cannot be exchanged with the physical asset, those that can only be exchanged with the physical asset overseas, and those that can be exchanged with the physical asset domestically. Discovering how these differences impact price formation is extremely critical in considering the formation of commodity ETFs in the future.

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