
Mizuho Economic Outlook & Analysis

August 3, 2020

The current state and outlook on the gold market

We expect that the gold market will follow firm footing reflecting high uncertainties and persisting low interest rate environment

< Summary >

- ◆ Gold prices, which experienced volatility during the financial market turmoil in March caused by Covid-19, have continued to rise since April, reaching the highest level since 2011. Gold futures momentarily reached the USD2,000 level for the first time in history.
- ◆ Gold prices surged to record high levels, indicating the possibility that supply-demand could ease on weaker demand for jewelry and an increase in recycling. Strong demand from ETFs and central banks could also fade.
- ◆ However, the development of a Covid-19 vaccine and its use in developed countries is expected to take at least one year, which means during this time gold will be a preferred asset class. Going forward, the gold market is expected to remain firm while undergoing corrections.

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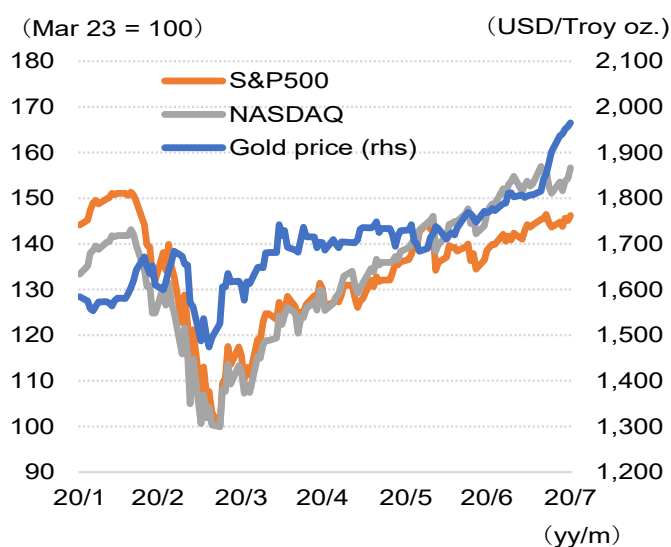
1. Gold prices reach record high since 2011 amid a stock market rally

The worldwide spread of the Covid-19 pandemic from the end of February to March 2020 greatly shook the global financial markets. As the S&P 500, which reached a record high on February 19, fell over 30% in the space of one month from this record high, and the 10-year US Treasury yield reached a record low momentarily in the 0.3% level, the global financial markets experienced historical volatility.

Gold (hereinafter gold refers to physical gold except where noted) prices continued to rise from when the global financial markets began to fall into turmoil, reaching the highest level since 2013 on March 6. Thereafter, however, the breadth of the fall in stock prices slid even further, causing investors to secure cash, leading to a sell off of gold as well. Gold prices dropped up to around 12% from the high reached on March 6. The price range of gold in the month of March (difference between monthly high and low) was 200 USD, marking a one-month period of extremely high volatility.

Stock markets quickly recovered from the lows recorded in late March, buoyed by the large-scale fiscal stimulus packages and monetary easing of each country. However, gold prices also rose, despite expectations that they would slide as investors' risk aversion faded. In July, gold reached the USD1,900 level, the highest level since November 2011 (**Chart 1**). This paper will examine the future outlook of the gold market after reviewing the characteristics of gold as an investment class and supply-demand trends. Furthermore, gold prices will be quoted using the LBMA Gold PM Fixing Price in dollars determined in the afternoon by the London Bullion Market Association.

Chart 1: Gold price and US stocks



Note: Stock prices indexed to 100 based on the most recent low of the S&P 500 (March 23)
Source: Made by MHRI based upon Bloomberg

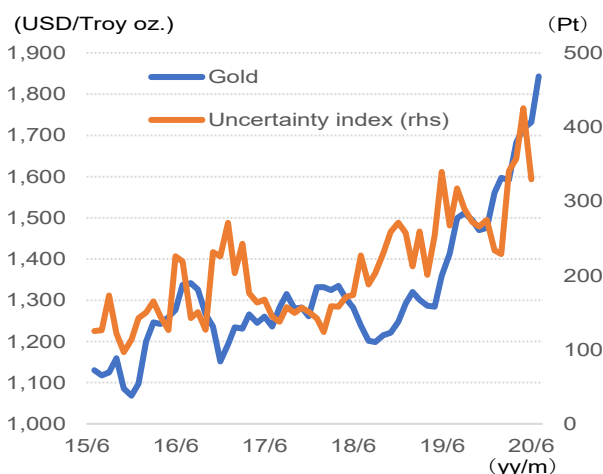
2. Characteristics of gold as an investment class

(1) Gold preferred in times of rising uncertainty

Gold is a real asset that has value and will never completely lose its value, no matter how largely the price may fall. In addition, because of its qualities of high rarity, beauty, ease of processing, rust and corrosion resistance, gold was widely used as a currency until the emergence of paper currency. Even today, countries possess large quantities of gold as a foreign reserve currency, which suggests its high universal value and dual aspect as a currency.

Given this universal high value, gold has a strong reputation as a “safe asset” symbolized by the adage “flight to gold in times of emergencies.” As seen over the previous year, gold prices rose in phases of rising uncertainty, such as last August during intensifying US-China trade tensions and currently with the spread of the Covid-19 pandemic (**Chart 2**).

Chart 2: Gold price and uncertainty index



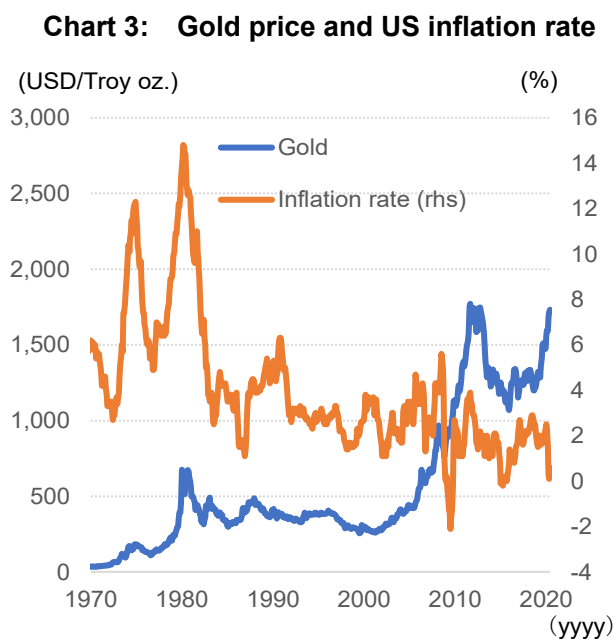
Note: Gold prices are monthly averages
Source: Made by MHRI based upon Bloomberg

As pointed out by central banks and international institutions, the current extremely high level of uncertainty over Covid-19, makes gold a preferred investment.

(2) Protection against inflation

As pointed out with other real assets such as real estate, since gold itself has value, it is known as an asset that protects against inflation (gold prices increase in phases where currency value declines due to inflation). This trend was confirmed during the high inflation era in the US from the early half of the 1970s to around 1980. This was a period of hyper-inflation when the twin oil crises of 1973 and 1979 sent crude oil prices to record

high levels and the US inflation rate (y-o-y change of the consumer price index) momentarily reached almost 15%. As this high inflation persisted, the price of gold rose 19.3 times over the 10-year period up to January 1980, but inflation sharply eased in the 1980s, causing the price of gold to fall from its high recorded in 1980 by around 60% over two and half years. This demonstrates the price of gold is largely influenced by fluctuations in inflation rate (**Chart 3**).



Note: Gold prices are monthly averages
 Source: Made by MHRI based upon Bloomberg

Looking at the correlation between the y-o-y change in the price of gold and inflation rate for each period, gold was strongly correlated from 1976 to 1980 around the time of the two oil crises. However, **Chart 4** shows that this correlation has been weakening since 1980. This stems most likely from the softening of gold prices in contrast to the acceleration of the inflation rate from the 1%-level to the 6%-level from the end of the 1980s through 1990, and the rise of gold prices in the mid-2000s when inflation was subdued. However, since there still is an ongoing positive correlation between gold prices and inflation rate despite not being as strong as that between 1976 and 1980, gold is considered an asset that works to some degree as a hedge against inflation. Given concerns regarding future inflation because of the unprecedented scale of current monetary and fiscal policy measures, there is the possibility that gold is being preferred as an asset class. However, as at the present time, there has not been a rapid increase in inflation or signs of this, including long-term expected inflation.

Chart 4: Correlation between gold price and US inflation rate

Period	Correlation
1970s	0.36
Jan 1976 to Dec 1980	0.88
1980 to 1999	0.48
2000 to 2019	0.40

Note: Calculated for each period based on the y-o-y change of gold price and US consumer price index

Source: Made by MHRI based upon Bloomberg

(3) Gold preferred in low interest rate environments

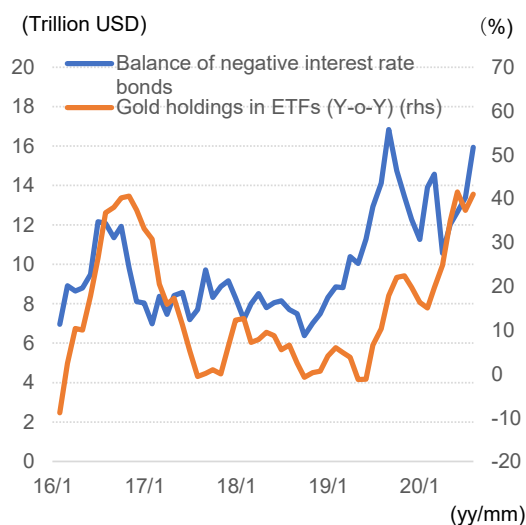
In contrast to financial assets (such as bonds and equities) which entail credit risks of issuers (such as government or corporate entities), there are no credit risks with respect to gold by its nature as a real asset. One benefit of gold is that it is not affected by the risk of specific countries' politics or fiscal situation or the bankruptcy risk of a company. On the other hand, unlike equities or bonds, gold does not generate interest or dividends (income gains) due to the absence of issuers. To earn returns from gold, the only way is to sell it for a higher price than it was purchased for (capital gain). The lack of income gain is a disadvantage of gold compared to financial assets.

However, bond yields are mostly in negative territory and coupon rates on newly-issued government bonds are close to zero in Japan and parts of Europe, making it difficult for investors to reap income gains. Even so, investments in negative-interest bonds will not necessarily result in a loss. As long as there are capital gains due to the fall of interest rates and the yield curve is normal, the roll-down effect¹ could turn the total returns positive on investments in negative interest rate bonds. However, with the side effects of negative interest rates and protracted low interest rates being pointed out, there are little expectations for a rate cut (increasing the size of negative interest rates) by the Bank of Japan or European Central Bank (ECB).

In March, with the Federal Reserve Board (FRB) going ahead with a large rate cut, the Bank of Japan and ECB did not cut rates, and decided instead to use increased asset purchases and company financial assistance as a means of monetary easing, which suggests there is little room for a rate cut. Negative interest rate bonds lack appeal as an investment since they generate almost no income gain and have scant expectations for capital gains because of limited room for interest rates to fall further. Unlike bonds, although gold does not guarantee a certain price (face value of a bond), since there is no maturity for gold,

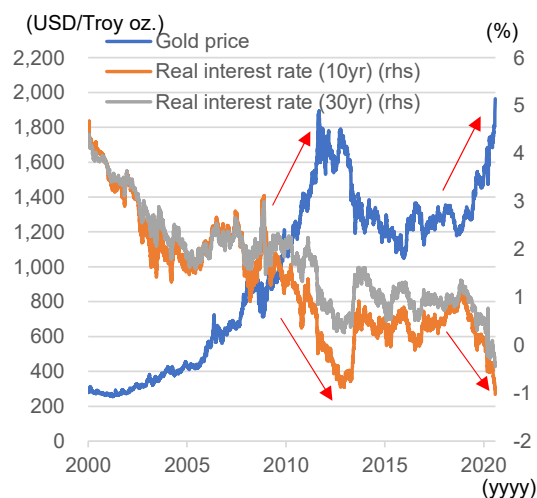
¹ The roll-down effect refers to the effect where bond yields rise and bond prices fall along with the passage of time under a normal yield curve (yield curve in which interest rates are higher on longer term debt).

Chart 5: Balance of negative interest rate bonds and gold holdings in ETFs



Note: Balance of negative interest rate bonds and ETF gold holdings based on Bloomberg data
Source: Made by MHRI based upon Bloomberg

Chart 6: Gold price and US real interest rate (10yr and 30yr)



Note: Real interest rates represent break-even inflation rate subtracted from nominal interest rate
Source: Made by MHRI based upon Bloomberg

there is no way of loss if held until maturity. Depending on the investor, gold may appear a more attractive option than negative interest rate bonds from the perspective of asset preservation. Actually, in phases where the amount of negative interest rate bonds is increasing, there is a tendency for the amount of gold held by ETFs to increase (**Chart 5**).

An evaluation comparing gold and bonds must consider US Treasury bonds, which are a main investment class for the world's investors. The relationship between gold and the real interest rate in the US (expected inflation rate subtracted from nominal interest rate), indicates a strongly negative correlation (**Chart 6**). If the real return from a US Treasury bond declines, gold will become preferred. In 2011, the last time that gold prices exceeded 1,900 USD, the real interest rate on the 10-year Treasury bond was negative.

Currently, while the expected inflation is recovering, nominal interest rates are falling, and the real interest rate on the 10-year US Treasury bond has fallen deeper into negative territory, which is believed to be one factor behind the rise in gold prices. Comparing the current environment with the period from 2011 to around 2012 when the real interest rate on the 10-year Treasury bond was also negative, the fact that even the 30-year Treasury bond yield is currently negative highlights how low the current interest rate environment is. The relative value of gold is rising in this historically low interest rate environment.

(4) Gold preferred in phases of weak dollar and sharp increase in dollar supply

Gold prices tend to rise during times of dollar weakness (**Chart 7**). This is because gold is traded typically in dollars, and gold value rises relative to the declining value of the

dollar as a currency. In the sense of affecting the value of the dollar, the monetary policy of the US is a major factor behind fluctuations in gold prices.

Chart 7: Correlation between gold price and US dollar

	Most recent 10 years	Most recent 20 years
Dollar index	-0.37	-0.43
USD/JPY	-0.49	-0.42
USD/CHF	-0.38	-0.43
USD/EUR	-0.29	-0.36

Note: Y-o-y change of monthly average of gold price and foreign exchange rate (both logarithms)

Source: Made by MHRI based upon Bloomberg

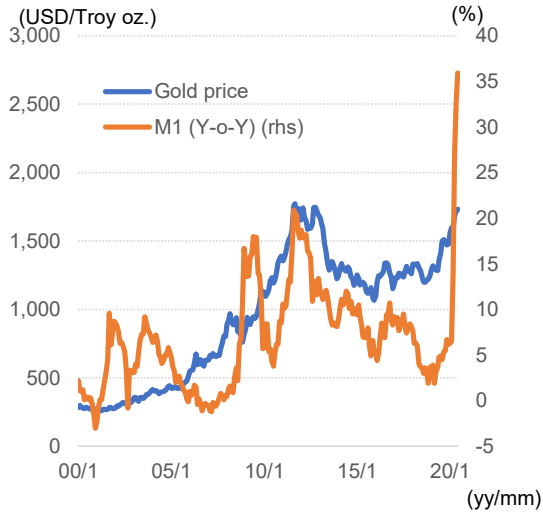
As a general rule, an interest rate hike by the FRB leads to a widening of the interest rate differential, causing the dollar to strengthen. Conversely, an interest rate cut by the FRB would lead to a contraction of the interest rate differential, causing the dollar to weaken. Looking back on the interest rate cut in March, the FRB made emergency rate cuts on March 3 and March 15, lowering the policy rate by a total of 1.5 percentage points.

On March 3 and March 16 (the next business day after March 15 which was a Sunday), the dollar index declined slightly compared to the previous business day in either case. The initial response to the rate cut was for dollar weakness. Even though the financial market turmoil intensified and the dollar strengthened, the financial markets gradually recovered due to the FRB's rate cut and announcement of a series of measures including the expansion of repurchase agreement (repo) operations, unlimited asset purchases, and the Central Bank Swap Arrangement. The dollar index has declined moderately since the end of March to today, and in July it reached lows not seen in two years. Amidst this, gold prices are rising.

When looking at the relationship between gold and the dollar, the next to focus on is the quantity of dollars. Following the Covid-19 pandemic, the US and other countries have undertaken large-scale monetary easing. Generally, in a monetary easing environment, the money supply (this paper refers to M1) will increase. There is no clear correlation² between gold prices and US money supply since 2000, but after the Global Financial Crisis of 2008, the growth of the money supply accelerated on large-scale economic stimulus from 2009 to 2011, and during this time the price of gold rose, and when growth of the money supply slowed from 2012 to 2015, gold prices declined (**Chart 8**).

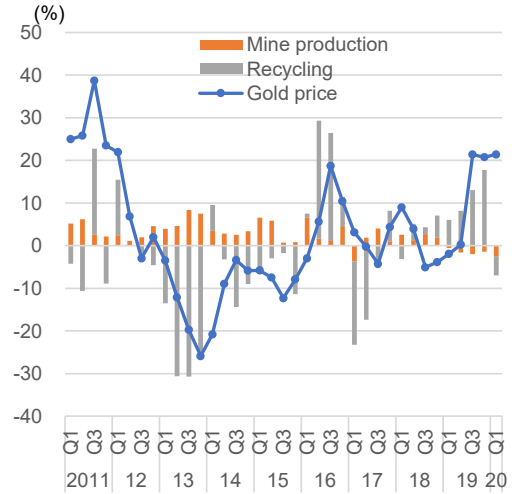
² The correlation factor of gold price and money supply (M1) month-on-month and year-on-year is roughly 0 after 2000, around 0.2 from 2010, and around 0.5 from 2015.

Chart 8: Gold price and US money supply



Source: Made by MHRI based upon Bloomberg

Chart 9: Gold supply and gold price (y-o-y change)



Source: Made by MHRI based upon World Gold Council

As a result of monetary easing by the FRB since March, money supply has increased sharply, and gold prices have risen. The growth of the money supply on a year-on-year basis is expected to maintain a high level for the time being, which should underpin gold prices.

3. Supply and demand trends

(1) Supply

Gold supply is mainly from mine production and recycling. According to the World Gold Council (WGC), mine production accounted for 72% of the total supply in 2019, and recycling 27%. Looking at supply trends since 2010, compared to mine production which is relatively stable, there is large fluctuation in the share of recycling (**Chart 9**). This stems most likely from the fluctuation of gold prices³

The average price of gold in the Jan-Mar quarter of this year was USD 1,583, the highest level in seven years, while the rate of increase in price (y-o-y) was 21%, exceeding 20% for three consecutive quarters. Given the price level and high rate of increase, there should have been an increase in recycling, but ultimately recycling was down 4% y-o-y. Mine production was also down by 3%, and overall supply was down by 4%. The reason for the decrease in supply was the shutdown in operation at mines, stay-at home orders, and the closure of shops that purchase recycled products due to Covid-19.

³ The correlation factor of year-on-year change in recycling and gold price from Jan.-Mar. 2011 to Oct.-Dec. 2019 is 0.53.

In the Apr-Jun quarter of this year economic activities were stopped or contracted due to the impacts of lockdowns mainly in Europe and North America, so it would appear that supply continued to stagnate, but currently, economic activities around the world are beginning to restart, which suggests supply will increase in the second half of the year. In particular, the amount of recycling impacted by gold prices are expected to recover earlier than mine production because of the elevated price of gold as well as easing or lifting of stay-at home orders and restart of store operations. For this reason, there is a low possibility that the supply side will cause any tightening in the supply-demand balance.

(2) Demand

Demand for gold is mainly from jewelry, investment (total of bars, coins and ETFs) and central banks. According to WGC, the breakdown of demand in 2019 was 49% for jewelry, 29% for investment, and 15% for central banks, which account for more than 90% of total demand.

Demand for jewelry, which accounts for the largest demand, and bars/coins, which maintain a consistently high share among investment, declines when gold prices rise, and tend to rise when gold prices fall (**Chart 10**)⁴. The purposes of gold-ownership are different for physical demand (jewelry) and investment (bars/coins), but in either case individuals comprise the main segment of demand, with individuals tending to refrain from purchases when prices are rising and purchase when prices are falling. Furthermore, demand in the Jan-Mar quarter of this year dropped by 39% y-o-y for jewelry and by 6% for bars/coins, as both were down, due to the contraction or suspension of economic activities caused by Covid-19 and rising prices.

As for ETFs, in contrast to jewelry and bars/coins, demand tends to increase when gold prices rise, and decline with prices decline (**Chart 10**)⁵. Gold prices during the Jan-Mar quarter of this year increased greatly by 7% q-o-q and by 29% y-o-y, respectively, resulting in weaker demand among the jewelry, bars/coins, and central banks, but ETF demand increased sharply about six-fold compared to the previous year. Even in terms of periods other than the Jan-Mar quarter of this year, ETF demand increases sharply in quarters when prices significantly rise on a quarter-on-quarter basis, and ETF demand drops sharply in quarters when prices fall (**Chart 10**). This suggests that there are large-scale inflows and outflows of funds into ETFs driving sudden changes in the gold market.

Central banks, which comprise the largest segment of demand after jewelry and

⁴ The correlation factor of year-on-year change in gold price and month-on-month change in jewelry and bars/coins demand during the period from the Jan.-Mar. 2011 to Oct.-Dec. 2019 is -0.46 for jewelry and -0.36 for bar/coin.

⁵ The correlation factor of year-on-year change in gold price and breadth of change in ETF holdings from the previous month during the period from Jan.-Mar. 2011 to Oct.-Dec. 2019 is 0.40.

investment, have continued to build their gold holdings nearly unrelated to price changes (Chart 11). The main reason is because China and Russia are increasing⁶ gold reserves with the purpose of diversifying foreign exchange reserves, but the rate of increase slowed when nominal interest rates were falling, and conversely the rate of increase rose when interest rates were rising. As such, the low interest rate environment can be cited as a reason for the increase in holdings in recent years.

Chart 10: Gold demand and gold price (m-o-m change)

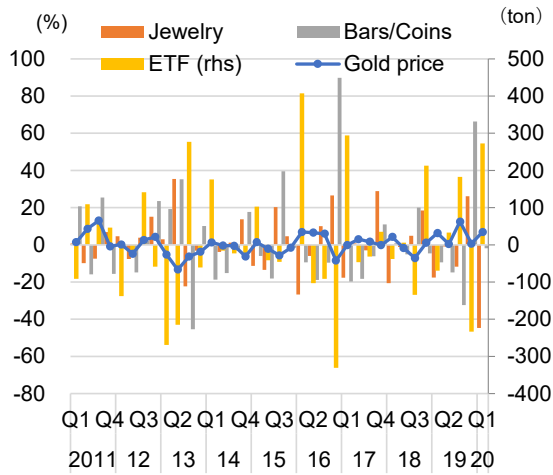
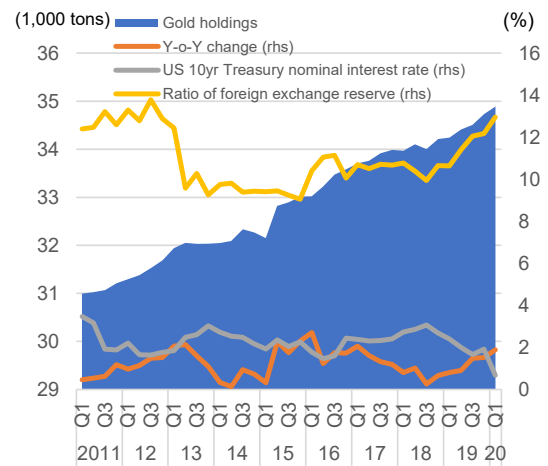


Chart 11: Gold holdings by central banks



Note: ETFs represent breadth of change from previous month; all others are rates of change from previous month
Source: Made by MHRI based upon World Gold Council

Source: Made by MHRI based upon Bloomberg and World Gold Council

⁶ According to the WGC, world gold reserves between Jan-Mar 2011 and Jan-Mar 2020 increased by 3,900 tons, but around 60% of this increase is attributed to China and Russia (2,400 tons).

4. Closing

Gold prices have risen sharply since July to reach historical highs, which suggests supply-demand could ease from weaker demand for jewelry and bars/coins and the increase in amount of recycling in the future. In addition, there is a possibility demand from ETFs and central banks will decline, too. According to WGC, gold held by ETFs up to June of this year increased by more than 700 tons from the start of this year, but given rising prices until now, many ETF holders are believed to have unrealized gains. Gold futures reached a record high USD 2,000 level, providing a sense of accomplishment in the market. It would not be a surprise if ETF demand momentarily declined due to a lull in the weaker dollar and declining interest rates. As for central banks, Russia, which increased its gold holdings the most (of all the countries) over the past 10 years, announced in March that it would stop purchasing gold in April and beyond, raising the possibility that purchases by central banks will slow⁷.

There is a possibility gold prices could fall on temporary easing of the supply-demand balance, but the gold market is expected to remain firm for the time being, while undergoing corrections. This is because the factors behind the current rise in gold prices will remain intact for the moment: (1) high uncertainty about the future (rising safe haven demand); (2) ultra-low interest rate environment symbolized by a high balance of negative interest rate bonds and significantly negative real interest rates in the US (relatively rising appeal of gold); and (3) weak dollar and high growth of dollar money supply (rising value of gold versus the dollar). Looking forward, we expect the persistence of strong uncertainties due to concerns regarding the slow pace of economic recovery amid the ongoing spread of Covid-19 infections, the time needed for the practical use and global uptake of Covid-19 vaccines despite progress being made, and the resurgence of tensions between the US and China. In addition, under this environment, the current accommodative monetary policy will be maintained, causing gold to be viewed more favorably than bonds. The development and rollout of Covid-19 vaccines in developed countries is expected to take at least one year, and gold as an asset class is expected to remain preferred during this time.

⁷ http://www.cbr.ru/eng/press/pr/?file=31032020_192742eng2020-03-31t19_26_27.htm#highlight=gold

Chart 12: Evaluation of current situation and future of causes of gold price fluctuations

Uncertainty	Current situation	Future	Evaluation comment
Uncertainty	3	3	High uncertainty expected to persist over COVID-19 and US-China relations.
Inflation	1	1	Inflation fears low at the current point in time for both current situation and future.
Low interest rate environment	3	3	Interest rate tightening by major countries not expected until at least 2023 due to high uncertainty and low inflation.
Weak dollar	3	2	Additional monetary easing is a factor for the weak dollar. Even though further dollar weakening is unlikely, gold prices will be supported by dollar at consistently low levels.
Money supply	3	2	Continued rise in money supply will support gold prices for time being. Even with slowing growth of money supply next year and beyond, if asset purchases are increased, growth could accelerate.
Supply-demand	3	2	Currently, demand exceeds supply with rising demand from ETFs and declining supply. Over the short-term, there may be concerns of loosening supply-demand balance from declining demand and increasing supply, but investment demand should remain strong going forward.

Note: Current situation and future of each price factor evaluated using three grades. The higher the possibility of price factors pushing the price higher, the higher the score.

Source: Made by MHRI