

Forex Market View

Examining currency characteristics related to risk tolerance

- Changes caused by the correlation between global share prices and each currency
- A relative rise in US interest rates causes global stocks and the dollar to strengthen
- No change in the yen's pattern of weakening during risk-on and strengthening during risk-off

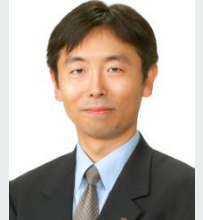
USD/JPY forecast range (latest: noon New York time)

19 Jul – 17 Aug: Y108.2-113.2/\$ (Y112.81/\$ as of 18 Jul)

Forex Market View DSFE163

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Daiwa Securities Co. Ltd.

Changes caused by the correlation between global share prices and each currency

Differing characteristics depending on the currency

One factor that affects a currency's value besides the strength of the home country's fundamentals relative to other countries' is the global stock market's overall risk tolerance. Different currencies have different characteristics; some rise during risk-on (risk-off) and some fall. We check here whether currency characteristics relative to risk tolerance have changed in recent years.

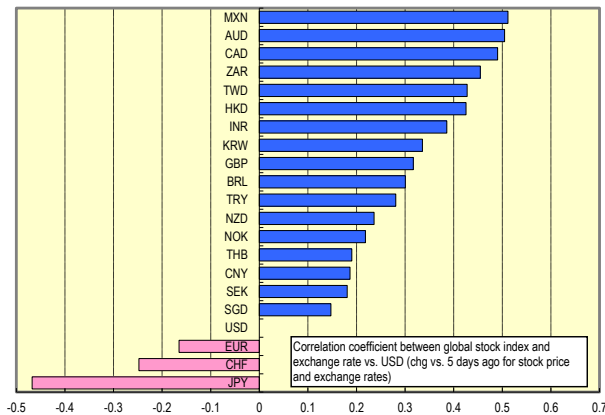
Currency characteristics in 2016

We look at the correlation coefficient between each currency's exchange rate versus the dollar (5-day change) and global stock market indices, a reflection of the market's risk tolerance, comparing 2016 with 2017. In 2016, the dollar exchange rate of many currencies showed a positive correlation with global share prices, and only three showed a negative correlation: the yen, the Swiss franc, and the euro. The central banks of all three of those countries/regions have a negative interest rate policy (NIRP). Currencies with relatively low interest rates across the curve tend to show a negative correlation with global share prices, while currencies with high interest rates tend to show a positive one.

Currency characteristics in 2017

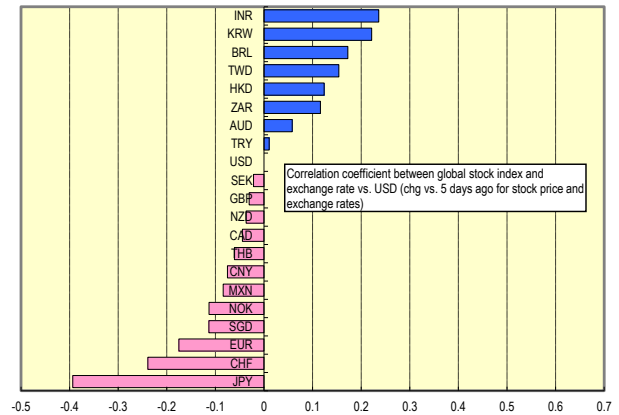
In 2017, currencies with a positive correlation between global share prices and their dollar exchange rate weakened, while those with a negative correlation strengthened. Excluding certain exceptions, however, there has not been much change in the tendency (i.e., in the rank ordering of correlation coefficient) for currencies with lower interest rates to show a negative correlation and currencies with high interest rates to show a positive correlation. We take this to mean that the big change was in the movement of the dollar rather than in the characteristics of each currency. In 2016, when global share prices rose (declined), the dollar tended to decline (rise) relative to other currencies, but that tendency has weakened.

Chart: Correlation Coefficient Between Global Stock Index and Exchange Rate vs. USD in 2016



Source: Thomson Reuters; compiled by Daiwa Securities.

Chart: Correlation Coefficient Between Global Stock Index and Exchange Rate vs. USD in 2017



Source: Thomson Reuters; compiled by Daiwa Securities.

A relative rise in US interest rates causes global stocks and the dollar to strengthen

In 2017, a rise in global share prices was accompanied more often by a weakening of the AUD (strengthening of the USD)

We use the example of the USD/AUD currency pair to determine why there was a change in how the dollar moved. The AUD's value quoted in USD often moved in the same direction as global share prices until October 2016, but the number of episodes of it moving in the opposite direction has increased since Donald Trump was elected US president in November 2016. In December 2016, April-May 2017, and September-December 2017, global share prices rose but the Australian dollar weakened against the US dollar. Consequently, the correlation coefficient between global share prices and the AUD's value in USD declined from 0.50 in 2016 to 0.06 in 2017, i.e., the positive correlation weakened.

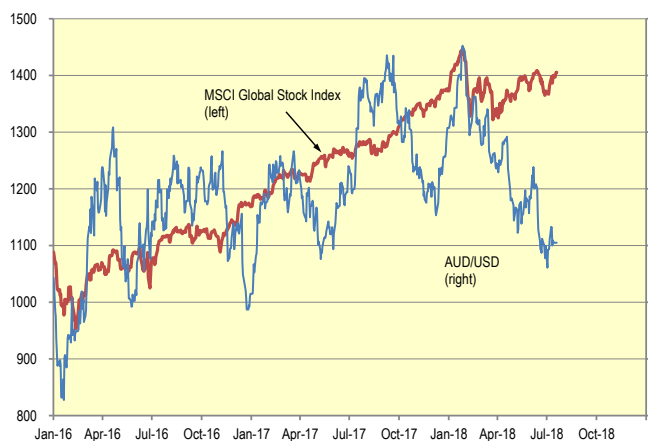
A relative rise in US interest rates causes global stocks and the dollar to strengthen

The common thread among episodes in which the AUD weakened against the USD while global share prices were rising was a relative increase in US interest rates (relative decline in Australian interest rates). For example, in September-December 2017, the Australia/US 10-year government bond yield spread shrank significantly, from above 0.5ppt to above 0.1ppt. It was because US interest rates rose relative to Australian interest rates that the AUD weakened against the USD even though markets were risk-on and global share prices were rising. Thus, because there was an increase in episodes during which rising US interest rates during risk-on mode caused the dollar to strengthen in 2017, there was a decline in the number of currencies showing a correlation between global share prices and their value versus the dollar that was positive, and an increase in the number showing a one that was negative.

In 2018, the positive correlation between global share prices and the AUD was restored

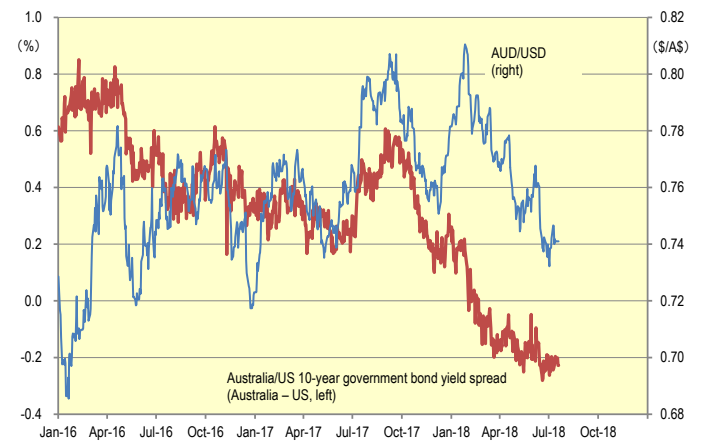
There was also a relative rise in US interest rates (relative decline in Australian interest rates) and a weakening of the AUD against the USD in 2018, along with many episodes of global share prices declining. Although in April-May there were times when the relative rise in US interest rates had an impact, pushing global share prices higher and weakening the AUD against the USD, the number of episodes in which the AUD's value quoted in USD moved in the same direction as global share prices increased again.

Chart: Global Stock Index and AUD/USD



Source: Thomson Reuters; compiled by Daiwa Securities.

Chart: Australia/US 10-year Government Bond Yield Spread, AUD/USD



Source: Thomson Reuters; compiled by Daiwa Securities.

No change in the yen's pattern of weakening during risk-on and strengthening during risk-off

The decline in the negative correlation between global share prices and the JPY is temporary

From the start of 2018 until 18 July, the correlation coefficients show a significant increase in the number of currencies with a positive correlation between global share price indices and their value in USD. That correlation coefficient for the AUD rose to 0.60, above its level in 2016 and the highest among the major currencies. Conversely, the number of currencies showing a negative correlation declined to only two: the JPY and the HKD. The correlation coefficient of the yen has been getting smaller, going from -0.47 in 2016 to -0.39 in 2017 and -0.07 in 2018. Nevertheless, we attribute this to the yen strengthening against the dollar in January-February 2018 at a time when global share prices were rising in response to reports of China becoming less keen to invest in the US, the US imposing protectionist import restrictions, and the US Treasury Secretary welcoming a weak dollar (many

currencies were strengthening against the dollar at this time, increasing the positive correlation between global share prices and their exchange rate versus the dollar). Since then, the yen's negative correlation with global share prices has been strengthening again.

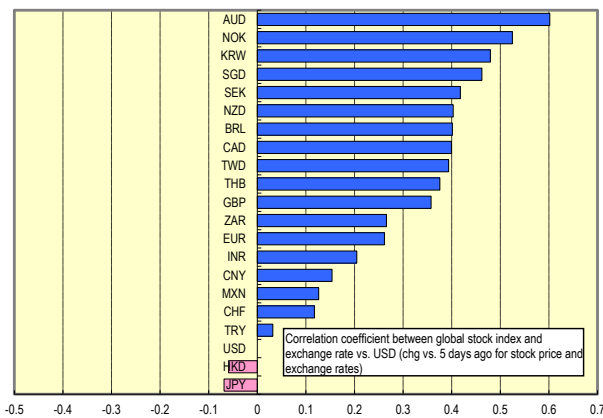
No change in the yen's pattern of weakening during risk-on and strengthening during risk-off

Recently, there has been a decline in the number of cases in which US protectionism has caused the dollar to weaken. Meanwhile, although the decline in oil and other commodity prices has put upward pressure on the dollar in some respects, the rise in US long-term rates has quieted down, thereby putting less upward pressure on the dollar. Under recent conditions of dollar moves being affected less by relative US factors, these correlation coefficients are probably now expressing each currency's characteristics. The yen is the currency with the strongest negative correlation with global share prices (a reflection of risk tolerance), and there has been no change in the tendency for the yen to weaken during risk-on and strengthen during risk-off. Furthermore, many currencies strengthen against the dollar during risk-on and weaken against it during risk-off, one of those being the euro.

The JPY market is significantly affected by risk tolerance levels

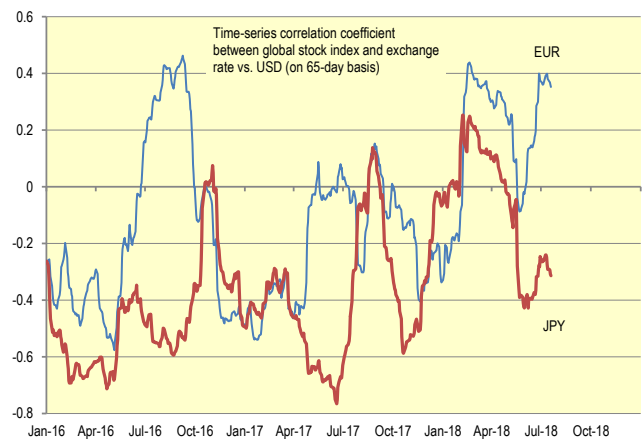
The recent rise in the USD/JPY cannot be attributed to the dollar being bought more than the yen during risk-off moves, because strong economic data has kept the US economic outlook from worsening despite the trade friction, and the market has not flipped to risk-off mode. The fact that cross-yen rates have not declined also suggests that the market has not been risk-off. The decline in oil prices triggered by expectations of increased supply has also strengthened the dollar and helped push the USD/JPY higher. Nevertheless, if the number of US economic indicators coming in below market expectations increases, thereby worsening the economic outlook, or if oil and other commodity prices start weakening because of prospects for declining demand, it will probably increase pressures for risk-off yen appreciation. Currency characteristics have not changed, and whether the yen weakens or strengthens will depend largely on the market's level of risk tolerance, in our view.

Chart: Correlation Coefficient Between Global Stock Index and Exchange Rate vs. USD in 2018



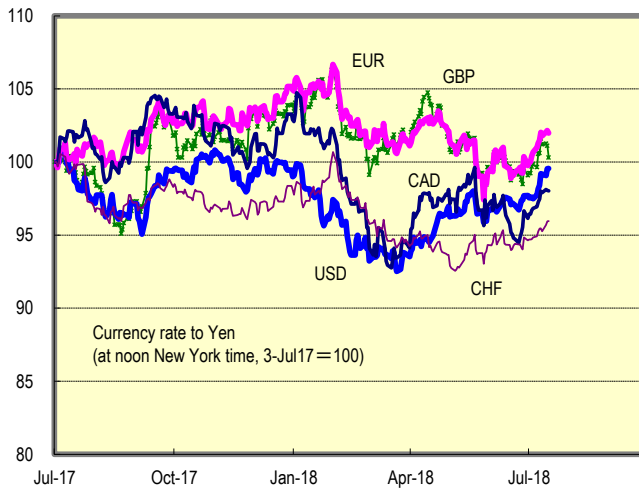
Source: Thomson Reuters; compiled by Daiwa Securities.

Chart: Time-series Correlation Coefficient Between Global Stock Index and Exchange Rate vs. USD



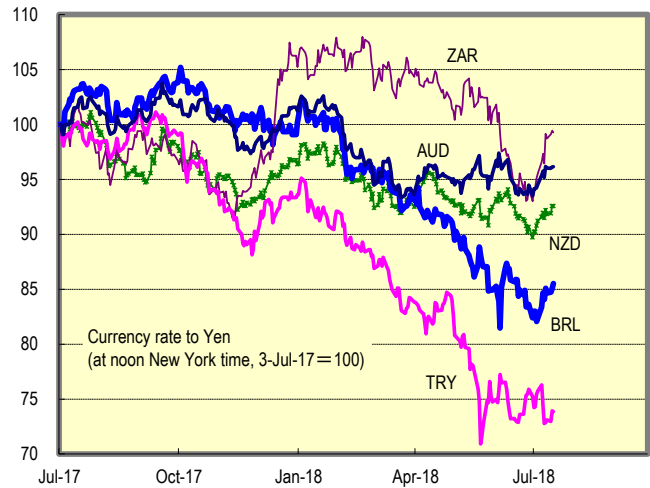
Source: Thomson Reuters; compiled by Daiwa Securities.

Chart: Major Currencies/JPY FX Index



Source: Fed, Thomson Reuters; compiled by Daiwa Securities.

Chart: EM Currencies/JPY FX Index



Source: Fed, Thomson Reuters; compiled by Daiwa Securities.

Chart: Currency Exchange Rate Forecasts

	Actual		Forecast				
	30 Mar 2018	29 Jun 2018	Jul-Sep 2018	Oct-Dec 2018	Jan-Mar 2019	Apr-Jun 2019	Jul-Sep 2019
USD-JPY	106.2	110.7	107.0 104-113	108.0 103-112	109.0 104-113	110.0 105-114	109.0 105-114
EUR-JPY	130.8	129.3	123.0 121-132	127.5 121-132	130.0 124-135	132.0 126-137	131.0 126-137
AUD-JPY	81.7	81.9	77.0 75-84	80.0 75-84	82.0 77-86	84.0 79-88	83.0 79-88
CAD-JPY	82.4	84.3	79.5 77-86	82.0 77-86	83.5 79-88	85.0 80-89	84.0 80-89
NZD-JPY	76.9	74.9	72.0 70-79	74.5 70-79	76.5 72-81	78.0 73-82	77.5 73-82
TRY-JPY	26.8	24.1	22.0 20-25	23.5 20-25	24.5 22-27	25.0 23-28	25.0 23-28
ZAR-JPY	9.0	8.1	7.7 7.5-8.7	8.1 7.5-8.7	8.4 7.8-9.0	8.7 8.0-9.2	8.6 8.0-9.2
BRL-JPY	32.1	28.6	27.0 25-30	29.5 25-31	30.5 27-32	31.5 28-33	31.0 28-33
KRW-JPY (100 KRW)	10.0	9.9	9.3 9.0-10.0	9.6 9.0-10.0	9.7 9.2-10.2	9.9 9.4-10.4	9.8 9.4-10.4
CNY-JPY	16.9	16.7	15.7 15.5-17.0	16.4 15.5-17.0	16.8 16.0-17.5	17.2 16.3-17.8	17.0 16.3-17.8

Source: BIS, Fed, Thomson Reuters; compiled by Daiwa Securities.

Notes: 1) Actual shows market rates at noon NY time.

2) Forecast upper row; as of quarter end, lower row; range during quarter.

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In order to ensure the fairness and transparency in the markets, Credit Rating Agencies became subject to the Credit Rating Agencies' registration system based on the Financial Instruments and Exchange Act. In accordance with this Act, in soliciting customers, Financial Instruments Business Operators, etc. shall not use the credit ratings provided by unregistered Credit Rating Agencies without informing customers of the fact that those Credit Rating Agencies are not registered, and shall also inform customers of the significance and limitations of credit ratings, etc.

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■ Credit Rating Agencies

[Standard & Poor's]

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[Moody's]

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[Fitch]

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- In addition to the purchase price of a financial instrument, our company will collect a trading commission* for each transaction as agreed beforehand with you. Since commissions may be included in the purchase price or may not be charged for certain transactions, we recommend that you confirm the commission for each transaction. In some cases, our company also may charge a maximum of ¥ 2 million (including tax) per year as a standing proxy fee for our deposit of your securities, if you are a non-resident.
- For derivative and margin transactions etc., our company may require collateral or margin requirements in accordance with an agreement made beforehand with you. Ordinarily in such cases, the amount of the transaction will be in excess of the required collateral or margin requirements**.
- There is a risk that you will incur losses on your transactions due to changes in the market price of financial instruments based on fluctuations in interest rates, exchange rates, stock prices, real estate prices, commodity prices, and others. In addition, depending on the content of the transaction, the loss could exceed the amount of the collateral or margin requirements.
- There may be a difference between bid price etc. and ask price etc. of OTC derivatives handled by our company.
- Before engaging in any trading, please thoroughly confirm accounting and tax treatments regarding your trading in financial instruments with such experts as certified public accountants.

* The amount of the trading commission cannot be stated here in advance because it will be determined between our company and you based on current market conditions and the content of each transaction etc.

** The ratio of margin requirements etc. to the amount of the transaction cannot be stated here in advance because it will be determined between our company and you based on current market conditions and the content of each transaction etc.

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The Financial Futures Association of Japan
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Type II Financial Instruments Firms Association