Daiwa Securities

Daiwa's View

Has yen depreciation gone too far?

- Most indicators suggest a fair value for the USD/JPY of 100-115
- The actual rate has only exceeded the 1973-base CPI purchasing power parity twice previously, and this marks the third time
- The spread between purchasing power parity and the actual rate is at its highest since the transition to floating exchange rates
- The yen has become exceptionally cheap

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Has yen depreciation gone too far?

The yen has depreciated to an exceptionally weak level

The USD/JPY climbed above 129 today. That is the highest it has been in about 20 years but not yet near any key levels, and it continues to reach new highs almost daily. Many expect it to reach 130, but it is uncertain whether it will stop there. Some key USD/JPY levels in the past are 135.15 in January 2002, 147.66 in August 1998, and 160.20 in April 1990, and but rate is still far from any of these levels.

Over the near term, exchange rates are swayed easily by the speculation of market participants, and we think conditions conducive to the USD/JPY moving higher are likely to remain in place for now. However, because exchange rates that diverge significantly from fundamentals are unlikely to last for an extended period, it is important to ask whether the yen's recent depreciation has gone too far or is at fair levels.

Chart 1 summarizes key levels for the USD/JPY suggested by a variety of measures at the micro level, including the breakeven and assumed exchange rate, and also at the macro level, including purchasing power parity. Although these measures range widely between the upper 60s to above 150, most of them indicate a key level between 100 and 115 as well as a "vacuum zone" between 115 and 145.

Chart 1: Key Levels for USD/JPY Suggested by Variety of Measures

USD/JPY	Measure
66.7	Purchasing power parity (Export prices, base year of 1973, Feb 2022)
67.1	Big Mac Index (*The Economist* of UK, Jan 2022)
89.8	Purchasing power parity (Corporate prices, base year of 1973, Feb 2022)
96.8	GDP purchasing power parity (OECD, 2021)
100.2	Breakeven rate among exporters (Manufacturers, FY21 Annual Survey of Corporate Behavior by Cabinet Office)
101.2	Purchasing power parity (World Bank, 2020)
101.5	Breakeven rate among exporters (FY21 Annual Survey of Corporate Behavior by Cabinet Office)
107.0	Desirable USD/JPY level for companies that benefit from yen depreciation (Survey on yen depreciation by Tokyo Shoko Research, Dec 2021)
108.0	Breakeven rate among exporters (Non-manufacturers, FY21 Annual Survey of Corporate Behavior by Cabinet Office)
110.9	Purchasing power parity (CPI, base year of 1973, Feb 2022)
111.9	Predicted exchange rate for FY22 (Mar 2022 BOJ Tankan survey, all-sized firms in all industries)
113.0	Desirable USD/JPY level for companies that are disadvantaged by yen depreciation (Survey on yen depreciation by Tokyo Shoko Research, Dec 2021)
113.8	Consumer purchasing power (OECD, 2020)
148.6	Purchasing power parity of industrial services (FY20 survey of domestic and overseas industrial prices of goods and services by METI*)
149.7	Overall purchasing power parity (FY20 survey of domestic and overseas industiral prices of goods and services by METI)
150.3	Purchasing power parity of industrial products (FY20 survey of domestic and overseas industrial prices of goods and services by METI)

Source: Various materials; compiled by Daiwa Securities.
**Ministry of Economy, Trade and Industry.*

Important disclosures, including any required research certifications, are provided on the last page(s) of this report.

With the yen cheapening amid a rapid increase in commodities prices, businesses are becoming increasingly concerned. At a regularly scheduled press conference on 29 March, Kengo Sakurada, Chairman of the Japan Association of Corporate Executives, commented regarding the weakening of the yen that he "does not at all think the current exchange rate is at a fair level." Akio Mimura, Chairman of the Japan Chamber of Commerce and Industry, said at a press conference on 7 April, "given current conditions, yen depreciation has more downsides than upsides for the Japanese economy." In contrast, Keidanren Chairman Masakazu Tokura said at a press conference on 4 April, "at the current level, this is not something to get worked up over," and while noting that stability is desirable, said "exporters benefit from a weaker yen. It is better not to make too much about the positives and negatives of yen depreciation at this stage."

According to the Survey on Corporate Behavior[1] released by the Cabinet Office, the average breakeven rate reported by exporters in the FY21 survey was 101.5, a slightly weaker yen than the 99.8 reported in the FY20 survey, but Y12.4 stronger than the 113.9 rate in December 2021, the month prior to the survey. The industry sector with the lowest USD/JPY (strongest yen) breakeven rate was nonferrous metals at 94.3 and that with the highest (weakest yen) was iron & steel at 108.6, and thus the yen's recent level above 128 is well above the breakeven rate for exporters in all industries. This significant gap between the breakeven rate and the actual rate is an indication that exporters have an ample profit cushion with exchange rates where they are.

Unlike the automakers and other exporters, importers have been suffering yen weakness together with the recent rise in commodity prices. Although the Survey on Corporate Behavior did not ask importers about their breakeven exchange rate, Tokyo Shoko Research conducted a survey on 1-9 December 2021 that asked respondents what the desirable USD/JPY level was for their company. Separating their answers regarding the desirable exchange rate into two categories, companies that benefit from yen depreciation and companies that are disadvantaged by it, the average answer from companies that benefit from yen depreciation was 113, but the average answer from companies that are hurt by yen depreciation was 107. A yen above 128 is nearly 20% weaker than the level deemed desirable by companies that are hurt by yen depreciation (i.e., importers). This is a serious gap. Additionally, we think such rapid changes in the exchange rate can have significant negative impacts on companies whether they are importers or exporters.

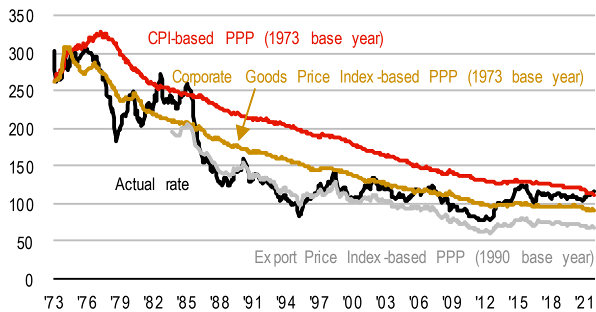
We have thus far considered the exchange rate from a micro perspective, which includes the breakeven rate for companies, but when looking at it from a macro perspective, purchasing power parity is the go-to theory for explaining the long-term trend in exchange rates. In this report we use price indices to calculate (relative) purchasing power parity, and because results can vary widely depending on the base year and specific price index used, the numbers should be viewed with significant latitude.

Chart 2 on the following page shows calculations for purchasing power parity using a 1973 base year for the Consumer Price Index, the Corporate Goods Price Index, and the Export Price Index[2]. The numbers show that relative to purchasing power parity based on the Corporate Goods Price Index, the actual rate can diverge significantly and take a long time to converge but reverts to trend over the long term. For deviations when the yen is strengthening, purchasing power parity based on the export price index has functioned better in the past, while for deviations with the yen weakening, that based on the consumer price index has functioned better.

[1] This survey was taken from 1 December 2021 to 15 January 2022.

[2] For the export price index-based purchasing power parity, because the current US export price index is not based on numbers that remain comparable going back to 1973, we use a base year of 1990, when there was a relatively small deviation between purchasing power parity and actual rates as calculated using historical data going back to 1973.

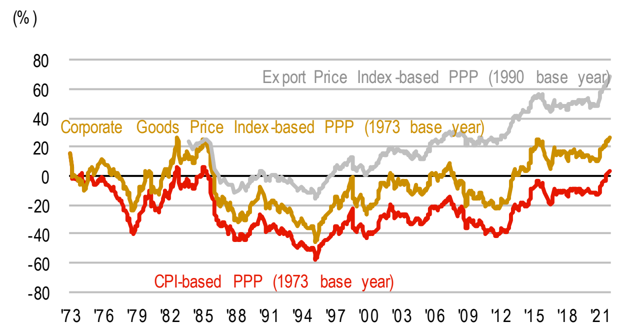
Chart 2: Purchasing Power Parity and Actual Rate of USD/JPY



Source: Ministry of Internal Affairs and Communications (MIC), BOJ, US Department of Labor, Fed; compiled by Daiwa Securities.

Note: For the export price index-based purchasing power parity, because the current US export price index is not based on numbers that remain comparable going back to 1973, we use a base year of 1990, when there was a relatively small deviation between purchasing power parity and actual rates as calculated using historical data going back to 1973.

Chart 3: Deviation of Actual Rate from Purchasing Power Parity



Source: MIC, BOJ, US Department of Labor, Fed; compiled by Daiwa Securities.

The historical data shows that the yen has weakened against the dollar beyond purchasing power parity based on the CPI only twice, in 1982 and 1985. Looking first at conditions around 1982, because inflationary pressures in the US were rising in response to dollar depreciation and the second oil crisis, in 1978 President Jimmy Carter had adopted measures to defend the dollar and Fed Chairman Paul Volcker tightened monetary policy significantly. Although President Ronald Reagan, who took office in January 1981, adopted policies to strengthen the dollar based on his argument that strong US needs a strong dollar, inflation subsided in 1982 and monetary policy became accommodative. Amid substantial reductions in the Fed's policy rate, the USD/JPY declined from above 270 in 1984 to above 220.

Looking next at conditions around 1985, the dollar went through another period of strengthening, in part because of President Reagan's belief in a strong dollar as described above. However, under pressure from manufacturers and agribusiness, which became less competitive because of the strong dollar, US Congress became more protectionist and tried to implement policy changes to reverse dollar strength. On 22 September 1985, the Group of Five (G5) agreed, in what became known as the Plaza Accord, that exchange rates should more accurately reflect fundamentals, and therefore that the dollar should not be as strong as it was. Price moves after the Plaza cord were dramatic, and the yen had strengthened to a USD/JPY of 121 by end-1987.

Because President Reagan had pushed strong dollar policies from 1981 until the Plaza Accord in September 1985, this could be viewed as a single sample period, but our argument is that it was the change in monetary policy in 1982 and the change in exchange-rate policy in 1985 that reversed dollar appreciation. With the US now dealing with inflation rates at their highest in 40 years, current conditions are closer to those that prevailed around 1982. The dollar has been strengthening in currency markets, the point where the dollar is stronger and the yen weaker than their respective CPI-based purchasing power parities.

The Biden administration is not a proponent of a strong dollar like the Reagan administration was, however. The dollar's strength is a result of monetary tightening with the No. 1 priority on suppressing inflation. It therefore makes sense to believe that the dollar's current run of appreciation will be ended not by an international agreement like the Plaza Accord but rather by a change in US monetary policy.

The dollar's deviation above CPI-based purchasing power parity reached maximums of 6.3% in 1982 and 6.6% in 1985 (Chart 3). In February 2022 the dollar vs. the yen was at an upside deviation of 3.9%, but it is now more than 15%, its largest deviation since the transition to a floating exchange rate regime.

Although it remains difficult to forecast how sustainable US inflation is, we cannot rule out the possibility of the Fed tightening more than expected, which would create room for the yen to weaken further. As we have shown in this report, most fundamental-based indicators suggest a fair value for the USD/JPY of 100-115.

As already noted, measures of purchasing power parity need to be taken with a grain of salt, and because rising US interest rates are clearly the reason for the current appreciation of the dollar against the yen, it is difficult to state unequivocally that yen depreciation has gone too far. It is true, however, that the yen has weakened to exceptionally weak levels, with its deviation from CPI-based purchasing power parity now at a record-high. The deviation of the USD/JPY above CPI-based purchasing power parity lasted for five months in 1982 and seven months in 1985, while February 2022 marked the fifth month of the current period of deviation.

Lastly, although inflation in the US remains at 40-year highs and domestic worries are increasing, Japan's inflation is merely at a point where it may exceed 2%, even after adjusting for the fading of impacts from telecom fee reductions. We therefore expect purchasing power parity to gradually decline (in a yen strengthening direction) over time. Calculating CPI-based purchasing power parity using the consensus price outlook, we expect it to fall from 110.9 in February 2022 to 108.4 at end-2022 and to 106.8 at end-September 2023, which means the yen would be weaker than can be justified even at a USD/JPY of 110.

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