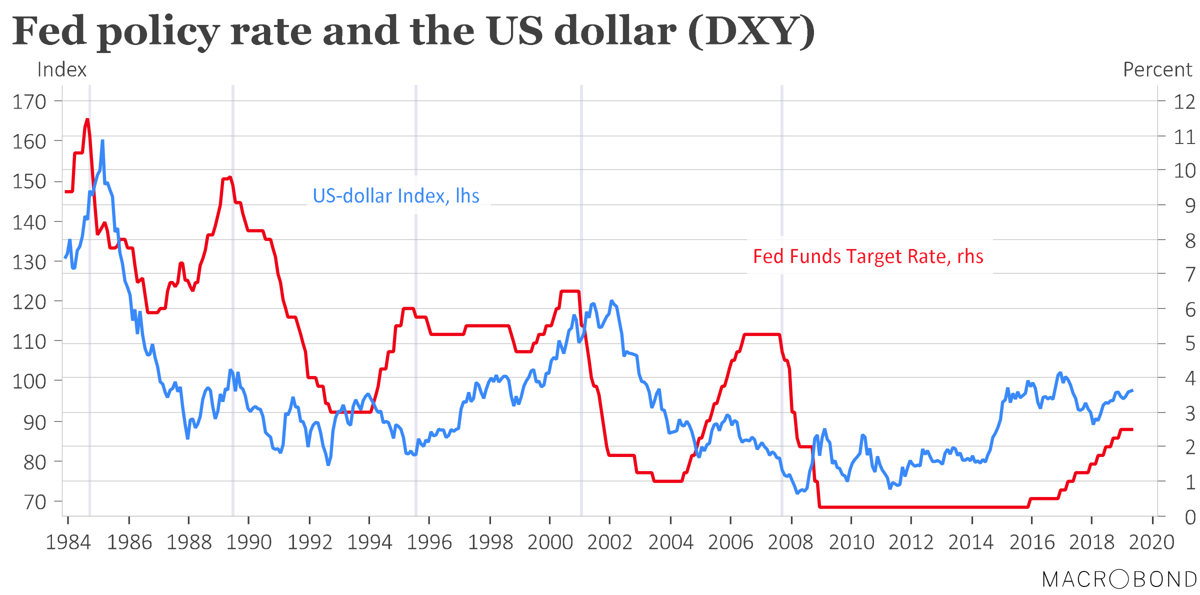
Recon Patrol
Macro and Financial Research for Professional Investors

Federal Reserve is one of the most powerful global financial institutions. US monetary policy affects not only the domestic economy, but also the global financial cycle and risk appetite on global financial markets. Fed also affects, through different channels, the actual monetary policy of other countries. Despite this, we are not able to find a stable pattern between the Fed policy rate and the dollar. The US dollar is apparently influenced by other factors to a higher degree. For example, the dollar tends to correlate strongly with the ups and downs of global equity markets. Other research show that risk appetite, market volatility and valuations of bond markets are important for the value of the dollar. So, our conclusion is that you must focus on the latter factors to understand the dollar developments, rather than on the US central bank's policy rate.

What happens when Fed starts to cut rates

The US-dollar has been declining a bit during the last couple of weeks, against the background of rapidly falling bond yields and increased expectations of one or more rates cuts from the US central bank. The latest pricing on financial markets suggests a reasonable probability for three or even four rate cuts during the remainder of the year. We leave the question unanswered if this is reasonable or not and focus on the behaviour of the dollar when Fed has started a rate cut cycle. Since 1984 we have seen five such cycles, one every 7th year on average. This is shown in the chart below, together with the US dollar development, in the form of the DXY index. We note that the fed fund target rate as well as the dollar has been on a declining trend, with cyclical variations during the last 35 years. It also seems to be some kind of connection between the policy rate and the dollar, but is there a stable statistical relationship?



We have surveyed the development of the dollar during periods immediately after the beginning of a rate cut cycle. This is shown in the table below. It is very few observations, but that's what we got. After the rate cut in September 1984, the dollar fell more than 2% during the following week but recovered and was only less than 1% weaker after a month. After another two months the dollar was even stronger than when the rate was first cut. The following four rate cut phases display different dollar patterns. At one point the currency has declined initially and then reversed, or vice versa. At others, the initial trend has continued. For example, during the latest rate cut cycle the US-dollar continued to weaken during the following three months, but in 1995 the dollar continued to strengthen. With the latest cycle as an exception, it took relative short time after the first cut for the dollar to recover, if it weakened at all.

Table. US-dollar development (DXY) during the Fed's last five rate cut cycles.

First rate cut	1 week	1 month	3 months	B/E	Strength	– 1 month
20 Sep 1984	-2,2%	-0,8%	+0,6%	15 Oct	2,0	+6,9%
6 Jun 1989	+2,3%	-3,6%	+0,4%	7 Jun	-0,5	+4,1%
6 Jul 1995	+0,7%	+0,9%	+3,6%	7 Jul	-1,6	-1,5%
3 Jan 2001	-0,3%	+0,1%	+0,9%	17 Jan	1,5	-4,0%
18 Sep 2007	-1,1%	-2,0%	-2,3%	8 Sep 2008	-1,7	-2,7%
11 Jun 2019	..	..	..	..	0,7	-0,8%

An objection can be that the dollar was strong when the rate cut cycle started, and that the first rate cut triggered a trend reversal. Alternatively, an already weak currency could decline further when rate cuts started. In the next to last column we have added a measure of currency strength. (The standard deviation of the previous five-year average at the time of the first rate cut.)

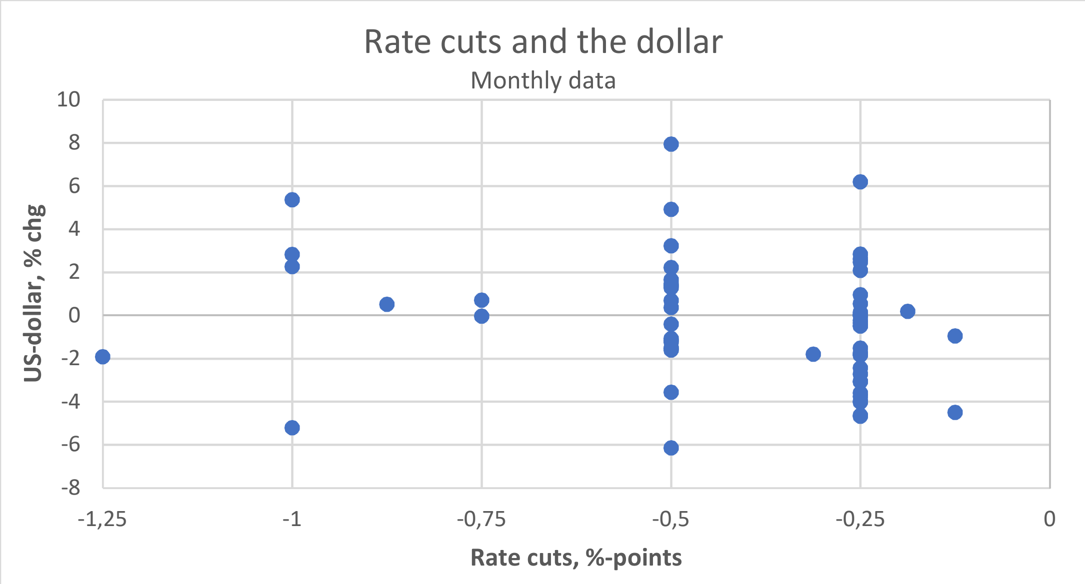
It is hard to find a pattern here. For example, the dollar was on the weak side both 1995 and 2007 but saw different developments after the first rate cut. On the same note, the dollar was strong both 1984 and 2013, but in the first case, the dollar weakened and then strengthened, while it was relative stable after the 2001 rate cut. Currently the US dollar is 0,7 standard deviations stronger than its five-year average.

Another objection is that the currency market already has anticipated the start of a rate cut cycle and the dollar has moved weaker (or stronger for that matter) beforehand. The last column in the table above shows the dollar development during the month before the first rate cut. It is hard to find any consistency here as well. It is noticeable that the dollar has weakened in advance of the three latest rate cut cycles, and to some extent during the last month. But generally, we can't find any consistent pattern between the start of a rate cut cycle and the development of the US-dollar both before and after the start.

Does Fed affect the dollar at all?

This leads us to the next question, which is if Fed's rate cuts generally have any significance for the dollar and if the level of the policy rate has any connection with the dollar at all.

In the chart below we show the size of monthly rate cuts since 1984 on the horizontal axis and the change of the US-dollar the following month, on the vertical axis. Most rate cuts during a month are of the size of 25 or 50 basis points and from the figure it obvious that it is almost equally probable that the dollar will strengthen or weaken a month after a rate cut.



In other words, it seems the dollar can move in any direction after the start of a rate cut cycle, as well as after the rate cuts that follows. But has not the level of the policy rate anything to do with the value of the US dollar? At least optically, in the first chart above, there seemed to be a positive correlation between the policy rate and the US-dollar. However, when we perform different statistical tests there are no stable connection. Below we show the result of a Granger causality test between the Fed Funds Target Rate and the DXY-index and we cannot reject the null hypothesis of no correlation. (We have tried several different periods and lags.) We have also used a new forecasting software, Indicio, which uses Shapley values to detect any influence from explanatory variables. Some simple tests show that the policy rate cannot add explanatory power compared to for example bond yields, to the development of the US dollar. (If interested in these tests, pls send a mail to contact@reconpatrol.com.)

Pairwise Granger Causality Tests
Date: 06/04/19 Time: 15:27
Sample: 1984M01 2019M12
Lags: 6

Null Hypothesis:	Obs	F-Statistic	Prob.
FFT does not Granger Cause DXY	419	1.68299	0.1237
DXY does not Granger Cause FFT		1.45753	0.1915

Fed is powerful, but does not seem to rule the dollar

Federal Reserve is one of the most powerful global financial institutions, if not the most powerful. US monetary policy affects not only the domestic economy, but also the global financial cycle and risk appetite on global financial markets. Fed also affects, through different channels, the actual monetary policy of other countries. (For an interesting model of US monetary policy se the excellent article ”US Monetary Policy and the Global Financial Cycle”, https://www.nber.org/papers/w21722.pdf.) Despite this, we are not able to find a stable pattern between the Fed policy rate and the dollar, neither if we look only on rate cuts nor on the level of the policy rate. The US dollar is apparently influenced by other factors to a higher degree. As shown in previous research, the dollar tends to correlate strongly with the ups and downs of global equity markets, when they lose in value, the dollar outperforms most other currencies, and vice versa. Other models of ours show that risk appetite, market volatility and valuations of bond markets are important for the development of the dollar. So, our conclusion is that you must focus on the latter factors to understand the dollar developments, rather than on the US central bank’s policy rate.

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