Discussion of Negative Interest Rate Policy (NIRP)

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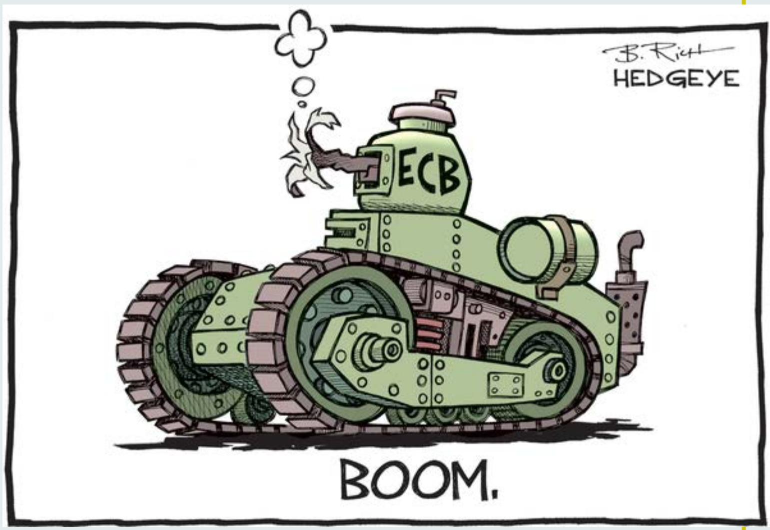
Goals of Negative Interest Rate Policy (NIRP)



1) Boost economic growth and avoid deflation.
2) Force banks to lend and offer very attractive terms to borrowers.
3) Punitive for investors to purchase short term, safe investments that offer little or negative returns.
    - Reverse economic incentives and change investor behavior by discouraging saving, promoting borrowing, and encouraging risk taking.

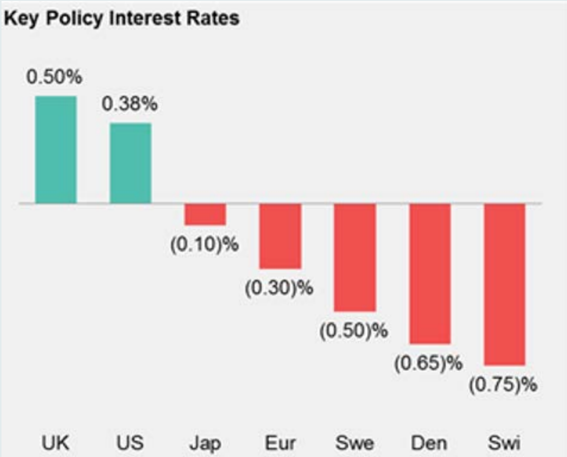
4) Devalue currency and make exports more attractive in global markets.

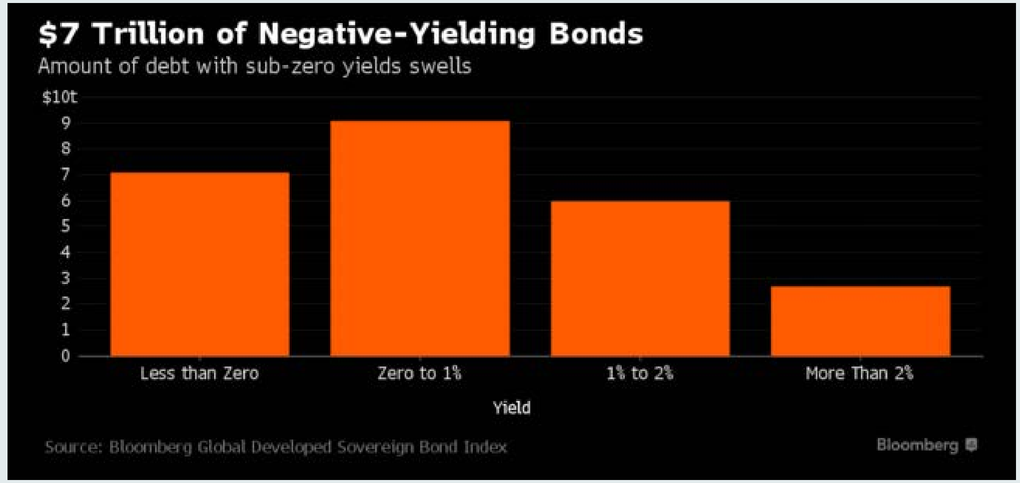
5) Impact banks by charging a “tax” on their excess capital reserves.

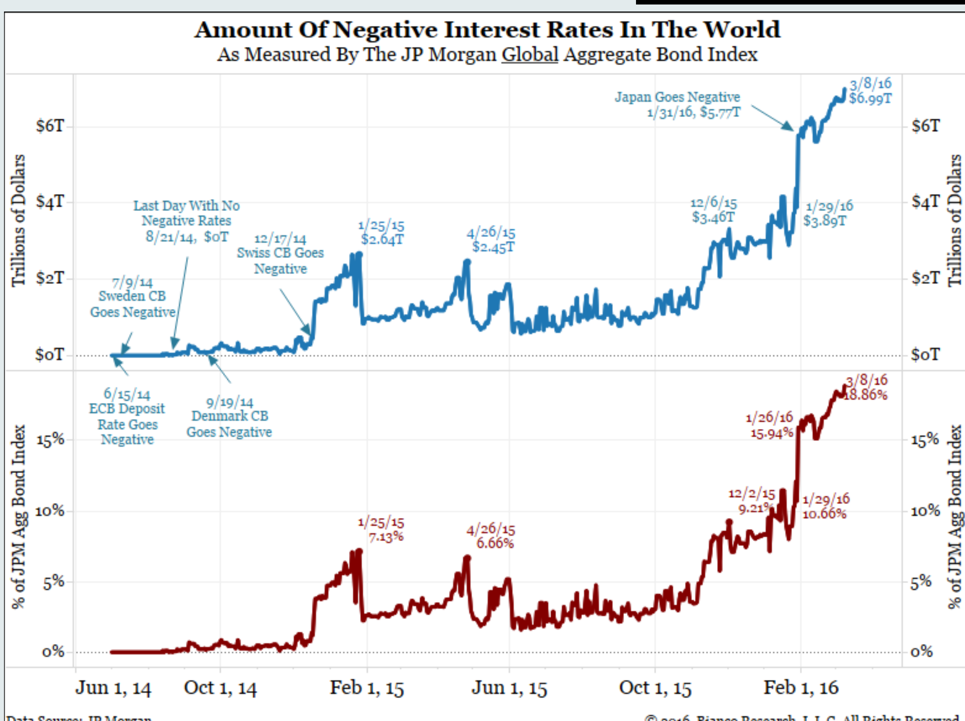
6) Encourage consumers to spend savings to promote economic growth.

- The pursuit of NIRP by central banks may suggest a sense of desperation driven by underlying economic weakness and policy ineffectiveness.

What has Happened so Far:







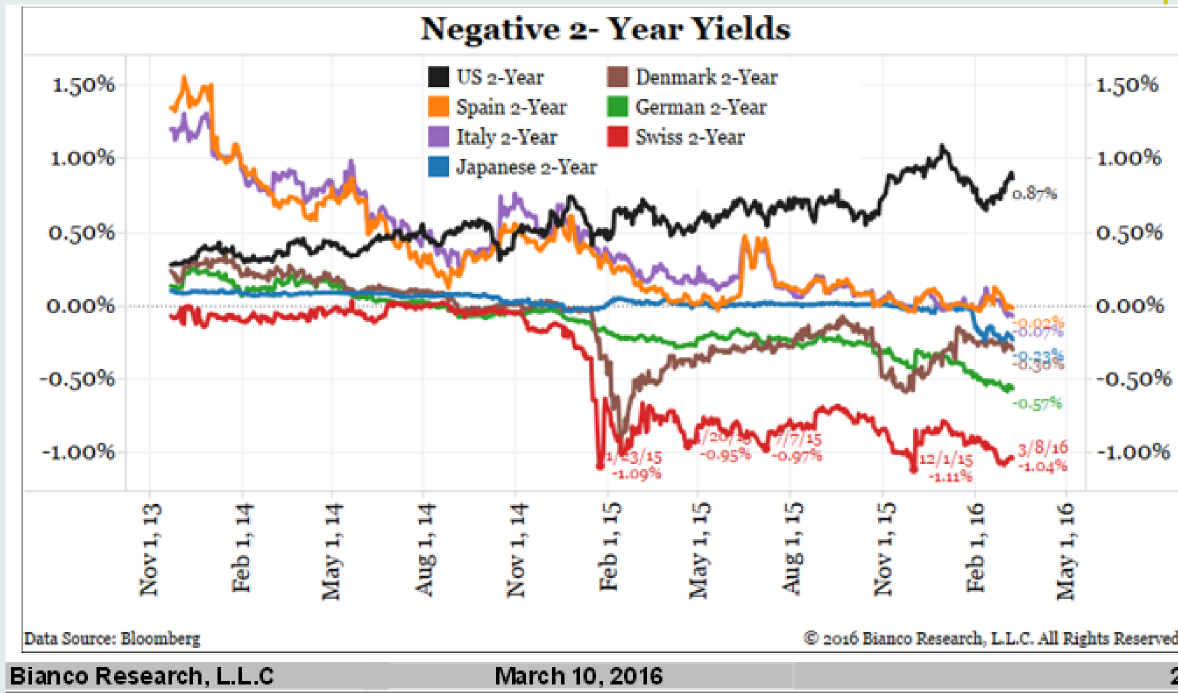
- In a handful of global developed countries, key policy rates have been set below zero. Essentially, central bank deposit rates (i.e. the interest rate on excess reserves), which determine the overnight lending rate between banks, have gone negative.

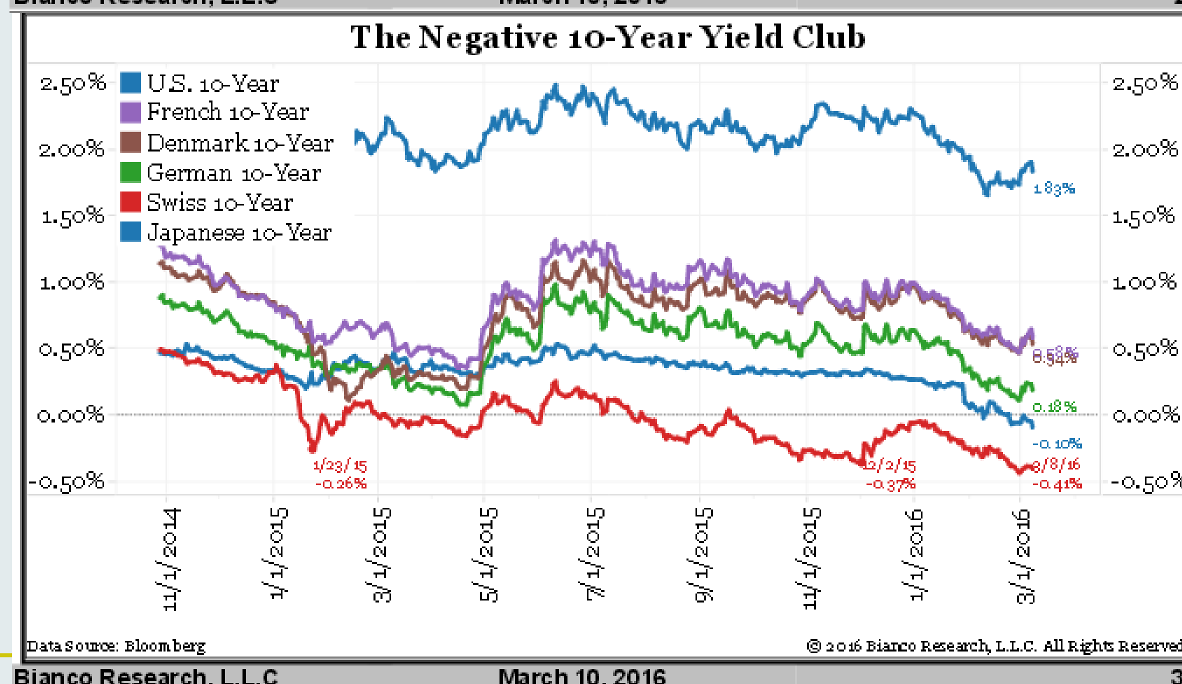
- Currently about $7 Trillion assets have negative yields.

Global Yields

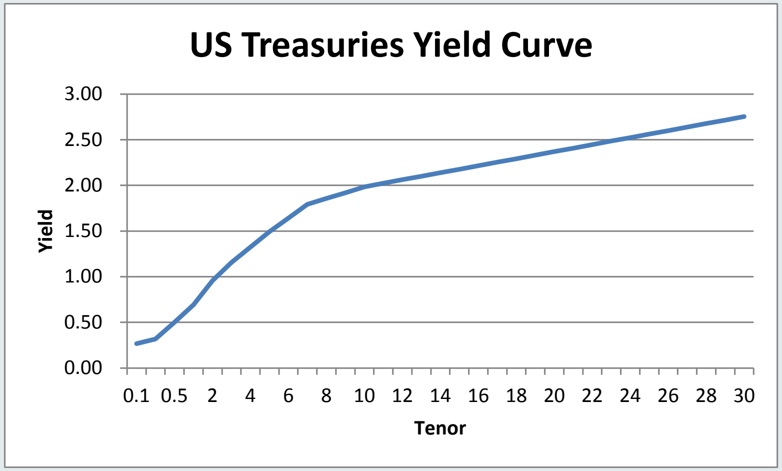
- Some yields are negative beyond the five year maturity, and in some cases the ten year, as key policy rate changes are coupled with continued Quantitative Easing programs (via either bond purchases or foreign-exchange intervention.)

- The U.S. stands out in contrast by offering significantly higher yields.

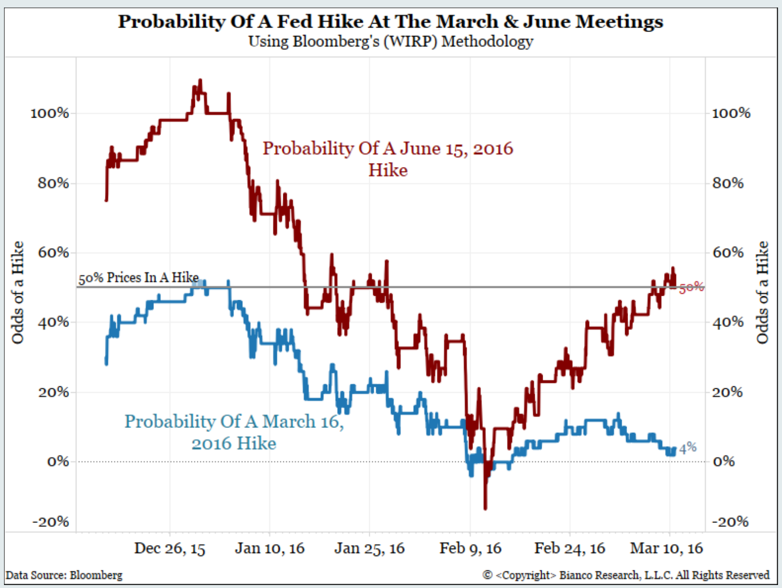




U.S. Interest Rates Tell a Different Story

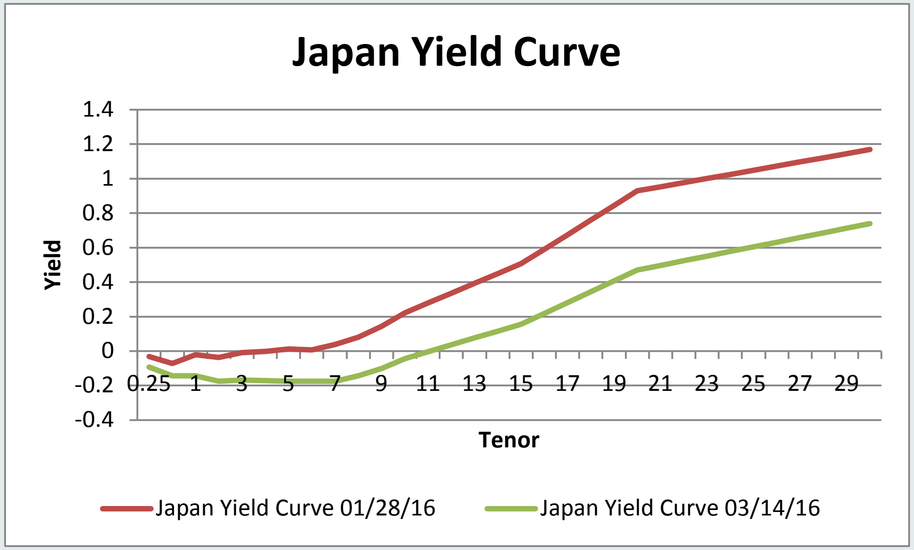


Tenor	Yield
1 Month	0.27
3 Months	0.32
6 Months	0.50
1 Year	0.69
2 Years	0.96
3 Years	1.16
5 Years	1.49
7 Years	1.79
10 Years	1.98
30 Years	2.75

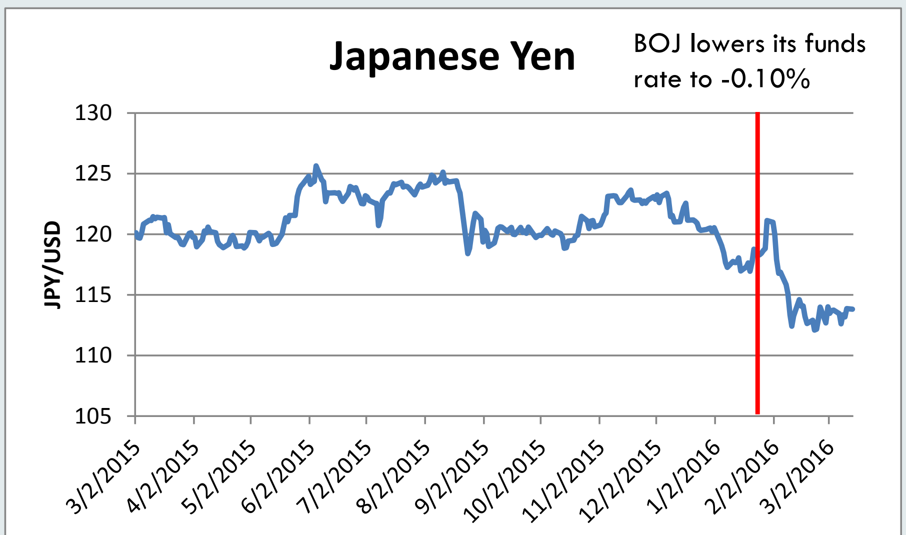


- In December 2015, the Fed started to normalize monetary policy by raising short term interest rates by 25bps.
- Fed members stated a goal of four additional 25bps rate increases in 2016.
- Currently the market is pricing in one 25bps increase at June meeting.

The Japanese NIRP Experience

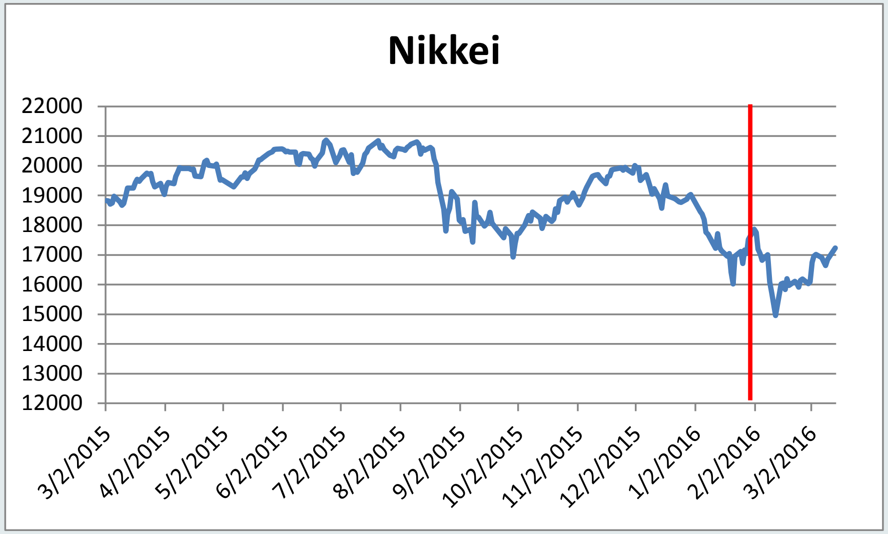


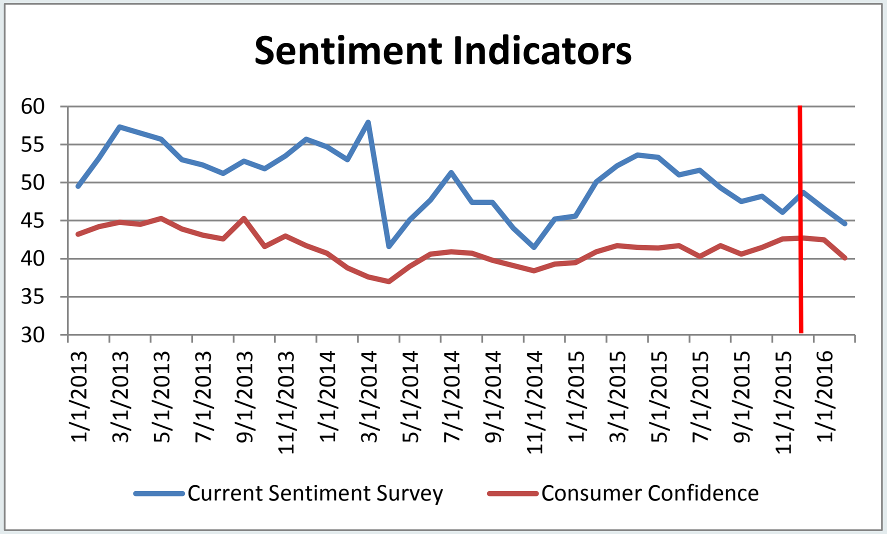
Tenor	Japan YC 01/28/16	Japan YC 03/14/16	Change (bps)
3 Months	-0.03	-0.09	-6
6 Months	-0.07	-0.14	-7
1 Year	-0.02	-0.14	-12
2 Years	-0.04	-0.18	-14
3 Years	-0.01	-0.17	-16
5 Years	0.01	-0.17	-19
7 Years	0.04	-0.18	-21
10 Years	0.22	-0.04	-27
30 Years	1.17	0.74	-43



- On Jan. 28, 2016 Bank of Japan (BOJ) reduced its reference rate to -0.10%.
- After an initial depreciation of its currency, the JPY has appreciated against the USD.

The Japanese NIRP Experience





- After the initial rally in Japan's stock market, stocks retreated. Currently the market is trading at similar levels as prior to the BOJ announcement.
- Sentiment, reflected in two different surveys, turned more pessimistic.
- It is still too early in the cycle to conclude if negative rates policy was effective in Japan.

Investment Implications of NIRP on Major Asset Classes

1) Countries adopting NIRP may see weaker currencies.

2) Negative yields spread to high-quality debt
   - Performance generally starts with government debt and can expand into high-quality corporate debt.

3) A tailwind for equities and high yield bonds.
   - Investors pursue more attractive returns among riskier securities when high-quality investments offer zero or often negative returns.

4) Better investment climate for non-NIRP nations
   - Investors may conclude that a country that embraces NIRP is desperate to turn around a weak economy. Equity and riskier debt may involve too much risk.
   - Stronger, non-NIRP economies may offer a more favorable climate for select investments

5) Divergent impact on other investments
   - Perceived stores of value such as gold, real estate, and commodities may become attractive
   - Bank stocks in NIRP countries have come under pressure

6) The pursuit of NIRP by central banks may suggest a sense of desperation driven by underlying economic weakness and policy ineffectiveness.