# Motivation

- International spillovers of negative interest rate policy (NIRP) is a very recent strand in the literature (e.g. Arteta, Kose, Stocker and Taskin 2016[1])
- Twofold interest in the Swiss franc:
    1. In times of turmoil, it is a major safe heaven currency
    2. Due to the "interest rate bonus" (Kugler and Weder 2002[2]) and the NIRP, the impacts of the Swiss National Bank's actions resonate far beyond Switzerland
- Lack of robust empirical papers criticizing the carry trade activity

[1] Arteta, Carlos, Ayhan Kose, Marc Stocker, and Temel Taskin. 2016. “Negative Interest Rate Policies: Sources and Implications.” Policy Research Working Paper Series 7791. The World Bank.

[2] Kugler, Peter, and Beatrice Weder. 2002. “The Puzzle of the Swiss Interest Rate Island: Stylized Facts and a New Interpretation.” Aussenwirtschafhet 57 (01): 49–64.

# What do we do?

In the context of the NIRP in Switzerland...

1. We analyse the **determinants** of the Swiss franc carry trade
    - Financial variables: interest rate differential between Switzerland and major currency, global market sentiment, nominal exchange rates, Swiss stock market index, and major currency stock market index

    **Hypothesis 1** The Swiss franc carry trade is impacted differently by the major currencies

2. How the carry trade activity in Swiss francs **impact** the financial variables in the model?

    **Hypothesis 2** The exchange rate is depreciating with an increased Swiss franc carry trade activity

3. Analysis setting
    - Weekly data; December 23, 2014 to September 15, 2020
    - Four major currencies: US dollar, euro, Japanese yen, and British pound

# Data and SVAR model

Table 1. Description of variables

| Variable | Definition | Source |
|---|---|---|
| $CT$ | Ratio of short positions over long positions of non-commercial traders | CFTC |
| $VIX$ | Market sentiment (CBOE DJIA Volatility Index) | FRED |
| $SM$ | Domestic stock market: Swiss Market Index ^SSMI | Yahoo Finance |
| $ER_i$ | Nominal exchange rates: USD/CHF, EUR/CHF, CHF/JPY, GBP/CHF | Yahoo Finance |
| $IRD_i$ | Interest rate differential using the spot Next London interbank offered rate (LIBOR): CHF minus major currency (USD, EUR, JPY, and GBP) | FRED |
| $FSM_i$ | Foreign stock markets: S&P 500 ^GSPC - USD, EURONEXT 100 ^N100 - EUR, Nikkei 225 ^N225 - JPY, FTSE 100 ^FTSE | Yahoo Finance |

- All variables are in natural logarithms, except the interest rate differentials.
- Yahoo Finance data was obtained and checked/cleaned with `R` packages `quantmod` and `BatchGetSymbols`

# CFTC data

- Some caveats:

> I. Bias in the classification of the traders
>
> II. Trades identified as speculative may not result from carry trades
>
> III. Only a small proportion of foreign exchange market activity is executed through exchanges (mostly OTC).
>
> --- Galati, Heath and McGuire (2007)[3]

- Nevertheless, as mentioned by market participants, CFTC data tends to be indicative of the trend of carry trade activity (Bank for International Settlements 2015)[4].

[3] Galati, G., A. Heath and P. McGuire (2007), 'Evidence of carry trade activity', *BIS Quarterly Review*.

[4] Bank for International Settlements (2015), *Currency Carry Trades in Latin America*, Bank for International Settlements.

# Results for the Impulse Response Functions (IRFs)

# Swiss franc carry trade activity is impacted...

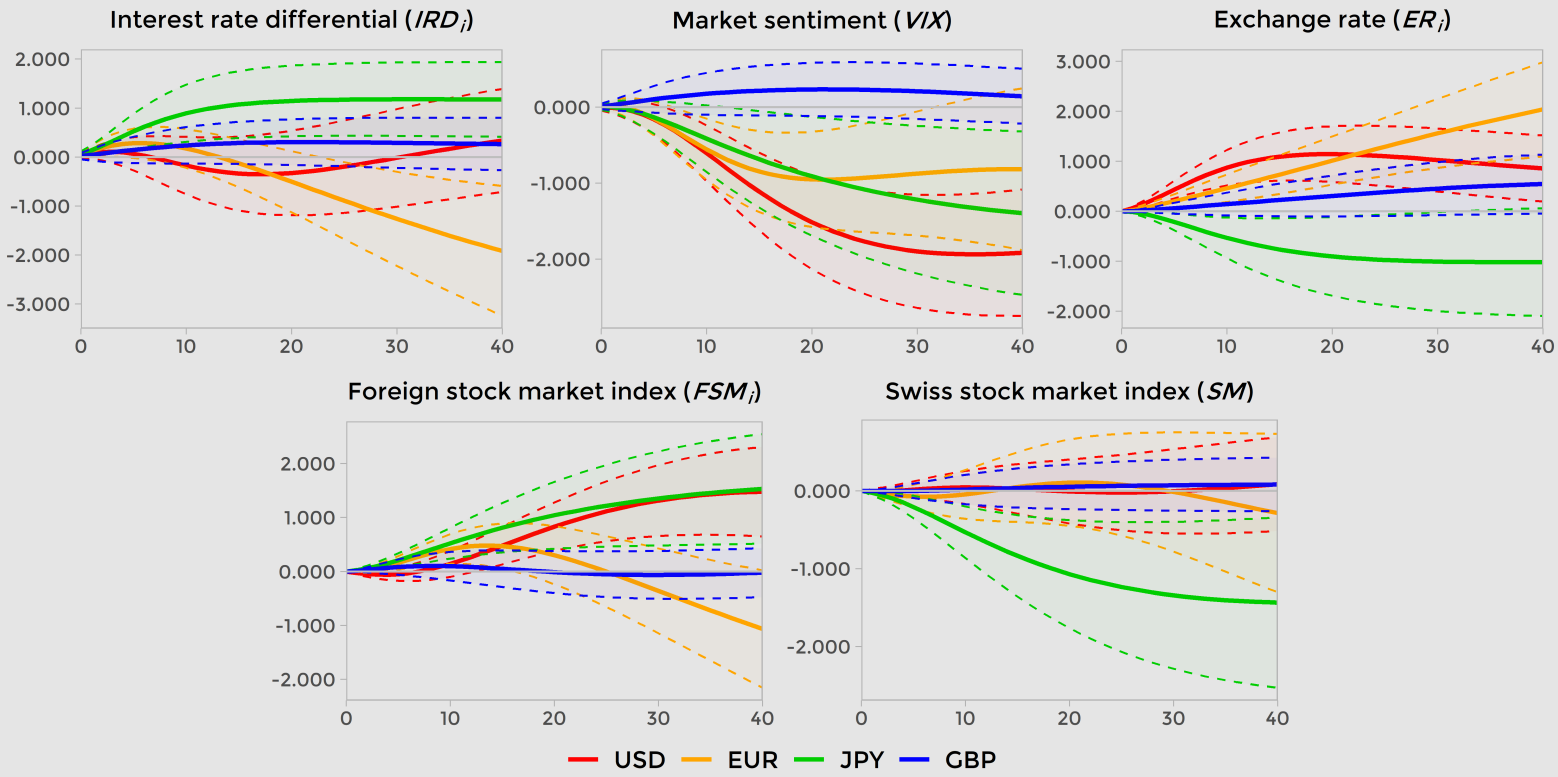


Figure 1. Cumulative structural carry trade ($CT$) responses to variables impulses in each model

| $IRD_i$ | $VIX$ | $ER_i$ | $FSM_i$ | $SM$ |
|---|---|---|---|---|
| EUR (-) | EUR (+) | EUR (+) | EUR (+, SR) | |
| JPY (+) | JPY (+) | JPY (-) | JPY (+) | JPY (-) |
| | USD (+) | USD (+) | USD (+) | |

# Concluding remarks

# Thank you!

bttomio@furb.br

Slides created with xaringan and xaringanthemer.