Bibliography of Microstructure of Foreign Exchange Markets*

Dagfinn Rime†

Abstract

This file provides a bibliography of the literature on the Microstructure of Foreign Exchange Markets. It includes clickable url- or doi-links1 to most of the published papers, and even to some of the working papers. I will add more annotations over time. The \LaTeX database used for this file is available from my homepage.

The references are organized in three sections: 1) Journal papers; 2) Working papers; and 3) Books, book-chapters, PhD dissertations, etc. Journal articles are classified into four subsections.

1 Journal papers

Journal papers are organized in four subsections. The two first subsections attempt to classify empirical papers based on whether they use observations on FX-quantities or primarily FX-prices. The third subsection is for theoretically oriented papers, while the last subsection is for papers that give an overview of the field or FX market and include literature surveys as well as papers with questionnaire evidence.

1.1 Quantities


Annotation: Data: State Street customer transactions. 20 currencies against USD in the data set, 10 are of developed economies (AUD, CAD, DKK, EUR, GBP, JPY, NZD, NOK, SEK, and CHF) and 10 are of emerging markets (BRL, CLP, CZK, HUF, KRW, MXP, PLN, SGD, ZAR, and TRY). Period: April 14, 1994 to July 17, 2008. Asset pricing analysis. Presented at 7th Annual CB Worskhop (UiS/NB, 11).


*Version 2.2, March 31, 2016. What is new? Updated and added annotations, and added lots of papers. Please email me paper-details, including links to paper (either doi or url), if you miss a paper on the list, yours or others. The links should preferably be stable links, e.g., links from IDEAS, SSRN, NBER, CEPR, and other institutions. A special thank goes to Andreas Wettstein, the creator of the \LaTeX package authorindex.

†BI Norwegian Business School, Department of Finance, Oslo, Norway. Email: dagfinn.rime@bi.no. Homepage: home.bi.no/a9610552/

1doi, short for Document Object Identifier, is a system for identifying scientific work in the digital environment, and is supposed to be more stable than url’s. Most publishers identify their journal-articles with doi’s. Any doi can be resolved into a url by entering it at http://dx.doi.org. See http://doi.org for more information. The doi of a paper can be found by doing a search at http://www.crossref.org/guestquery/


Annotation: Data: D2000-1 (Evans data set)


Annotation: Data: D2000-2 (LSE 1-week data set)


Annotation: Data: Daily Mexican Peso Inventories, order flow and volume (Carrera data set)


Annotation: Data: End-user, disaggregated (filtered), UBS. Currencies: EURUSD; JPYUSD; CHFUSD; GBPUSD; AUDUSD; NZDUSD; CADUSD; SEKUSD; NOKUSD. Period: 2. nov 2001 - 23. nov 2007. Frequency: Weekly.


Annotation: Data: EBS (Board data set)


Annotation: Data: Futures markets volume.


*Annotation*: Data: Reuters D2000-2 (LSE-II). Currencies: USDEUR; JPYUSD; USDGBP; GBPEUR . Frequency: 5 min. Used to be “Exchange Rate Determination and Inter-Market Order Flow Effects”.


*Annotation*: Data: Interbank indirect, Reuters D2000-2 (LSE I).


**Annotation:** Data: Proprietary data from a “large IDB in the FX market” (Interdealer Broker). All market orders with this IDB in the CAD and AUD. Period: 1 Oct 2000 - 30 Sept 2002.


**Annotation:** Emerging market.


**Annotation:** Data: Interbank direct, Reuters D2000-1. Currencies: DEM/USD. Period: 1. May - 31. Aug. 1996. Frequency: 5-minute. Estimate a structural model with GMM which distinguish between Common Knowledge news and Non-Common Knowledge (NCK) news, where order flow is a function of NCK-news. Evans finds that the importance of order flow increases with horizon and trading intensity. CK-news are rarely important.


**Annotation:** Data: D2000-1 (4 months, 1996). Comments by Hodrick


Annnotation: Data: CitiBank customer order flow


Annnotation: Data: End-user and interbank, A small German bank. Currencies: USD-DEUR. Period: 11. juli 2001 - 09.nov 2001 (Menkhooff dealer data)


**Annotation:** Data: End-user, State Street, closed-end country fund data. Countries: 25. Developed markets: Australia, Austria, Germany, Ireland, Italy, Japan, Spain, and Switzerland; and the emerging markets: Argentina, Brazil, Chile, India, Indonesia, Israel, Korea, Malaysia, Mexico, Pakistan, Philippines, Portugal, Singapore, South Africa, Taiwan, Thailand, and Turkey. Period: August 12, 1994 – December 24, 1998. Frequency: Weekly


**Annotation:** Data: D2000-2, one day in June 1993.


**Annotation:** Data: Bank of Canada customer-data.


**Annotation:** Data: BIS Triennial FX Survey.


**Annotation:** Data: Tokyo broker volumes (8 years)

**Annotation:** Data: Interbank indirect, EBS volumes, Reuters FXFX. Currencies: JPYUSD; CHFUSD; DEMUSD; JPYDEM; CHFDEM; USDEUR; JPYEUR; CHFEUR. Period: Jan 1998 - Oct 1999. The euro-spread debate


**Annotation:** Data: Interbank indirect, EBS volumes, Reuters FXFX. Currencies: JPYUSD; CHFUSD; DEMUSD; JPYDEM; CHFDEM; USDEUR; JPYEUR; CHFEUR. Period: Jan 1998 - Oct 1999. The euro-spread debate.


**Annotation:** Data: Interbank indirect, EBS; Currency: FFRDEM; Period: Jan-Dec 1998; Frequency: Daily. Document cointegration between rate-level and cumulative flow, and that this relation is a function of uncertainty.


**URL:** http://dx.doi.org/10.1016/j.finmar.2011.07.002


**Annotation:** Data: D2000-2 (LSE 99-00 data set)


Annotation: Data: Lyons’ dealer (D2000-1, broker-traders, inventories, 1992)


Annotation: Data: RBS customer data, 1 August 2002 – 2 March 2006.


Annotation: Data: Interbank indirect, EBS (McGroarty EBS-data). Period1: 1 August 1998 to 4 September 1999; Currencies1: USD/DEM, USD/JPY, USD/CHF, DEM/JPY and DEM/CHF. Period2: 1 August 1999 to 3 September 1999; Currencies2: EUR/USD, USD/JPY, USD/CHF, EUR/JPY and EUR/CHF; Frequency: 5min.


Annotation: Data: Interbank indirect, EBS (McGroarty EBS-data).


Annotation: Data: Interbank indirect, EBS (McGroarty EBS-data).


Annotation: Data: Interbank indirect, MICEX (Menkhoff MICEX-data).


Annotation: Data: Customer order flow


Annotation: Data: Interbank indirect, MICEX (Menkhoff MICEX-data).


Annotation: Data: Interbank indirect, disaggregated, EBS. Currencies: JPYUSD; JPYEUR; CHFUSD; CHFEUR. Period: Aug. 1999. Frequency: 1 sec, daily


Annotation: Data: End, user flow, “The bank is one of the top three FX dealers globally”. Period: Jan 2000 – Dec. 2002. Currencies: EURUSD; USDJPY; GBPUSD; AUDUSD; USDCHF; USDCAD.


  Annotation: Data: End-user (disagg) flow. Currency: NISUSD (New Israeli Sheqel); Sample: June 2000-June 2006; Frequency: Daily.


  Annotation: Data: Royal Bank of Scotland price-contingent orders


  Annotation: Data: Royal Bank of Scotland price-contingent orders. Presented at SIFR 03


  Annotation: Data: End-user and interbank, A small German bank (the “Menkhoff-dealer”).


**Annotation:** Data: Equity transactions (bilateral) flow, from Cross-Border Capital (London). Period: 1989-1996. Frequency: Yearly. Countries (14): North America: United States, Canada (dummy variable, NorthAm); East Asia: Japan, Hong Kong, Singapore (dummy variable, EastAsia); EU Europe: UK, Germany, France, Netherlands, Spain, Italy, Scandinavia (dummy variable, EU); Non-EU Europe: Switzerland; Australia.


**Annotation:** Data: Interdealer, indirect, Reuters D2000-2. Period: 8 Jan 1996 – 5 Oct 2011. Currencies (all against USD): AUD; HKD; INR; JPY; KRW; MYR; NZD; PHP; SGD; THB; TWD. Frequency: Daily.


**Annotation:** Data: The Lyons dealer-data (see Lyons, 1995, JFE).


**Annotation:** Data: Futures data (CME-IMM) and Reuters D2000-1. Period: 1996-2006.


1.2 Prices


Annotation: Data: D2000-2


Annotation: Data: D2000-2


Annotation: Data: High frequency indicative quotes


Annotation: Data: High frequency indicative quotes

**Annotation:** On the Tokyo trading restrictions. Updated version of “Testing for Microstructure Effects in Intraday Volatility: A Reassessment of the Tokyo FX Experiment”.


**Annotation:** Data: Reuters FXFX 03/01/92 – 30/12/98 5-minute obs. EUR/USD, USD/DEM, USD/JPY, GBP/USD, USD/CHF.


**Annotation:** Data: High frequency indicative quotes


Annotation: Data: High frequency indicative quotes


Annotation: Tokyo trading restrictions

**Annotation:** Tokyo trading restrictions


**Annotation**: Data: D2000-2. The euro-spread debate


**Annotation**: Data: EBS. Previously NBER WP 12413


**Annotation**: Tokyo trading restrictions


**Annotation**: Financial Globalisation, Risk Analysis and Risk Management.

ANNOTATION: Data: High frequency indicative quotes


  **Annotation**: Data: Called a broker for quotes every 10th minute. Nov 11–13, 1985, 0900am-0450pm. DEM and GBP vs. USD. 1m, 3m, 6m, 1y maturities.


1.3 Theoretical papers


**Annotation:** Presented at SIFR-workshop on FX microstructure 03.


**Annotation:** Also NBER 9398. Presented at SIFR 03


1.4 Overviews: Surveys, questionnaires, etc.


ANNOTATION: Presented at BoC/NB 06


ANNOTATION: Theory-model based on Bacchetta and van Wincoop (AER, 2006)


ANNOTATION: Questionnaire survey. See also Taylor and Allen, 1992.


ANNOTATION: Questionnaire survey. Combined revision of NBER Working Papers 7416 and 7417


ANNOTATION: Questionnaire survey

Annotated References:


Annotated Reference: Questionnaire survey


Annotated Reference: Questionnaire survey


Annotated Reference: His inaugural lecture when coming to LSE in 1987. Contains discussion of state of Exchange Rate Economics, and possible directions for future research. The version in his collected works on Hi-Freq FX includes a very nice appendix on market structure and operations based on interviews with market participants.


**Annotation:** Questionnaire survey


**Annotation:** Survey


**Annotation:** Survey


**Annotation:** Survey results


**Annotation:** Survey results


**Annotation:** Questionnaire survey


**Annotation:** Questionnaire survey


Annotation: Survey


Annotation: Survey. Describe the market in detail


Annotation: Questionnaire survey


Annotation: Survey

2 Working papers


Annotation: Presented at the MNB 07


Annotation: Questionnaire survey


Annotation: Questionnaire survey


Annotation: Presented at 1st Annual CB Workshop (BI/NB 05).


Annotation: Data: D2000-1 (4 months, 1996)

Evans, Martin D.D. “What are the origins of foreign exchange movements?” typescript, Georgetown University, 1999.

Annotation: Data: D2000-1 (4 months, 1996)


Annotation: Survey

Annotation: Data: D2000-1 (4 months, 1996).


Annotation: Data: D2000-1 (4 months, 1996)


Annotation: Presented at SIFR 03. Was NBER 10379.


Annotation: Data: CitiBank customer order flow


Annotation: Data: CitiBank customer order flow


Annotation: Data: StateStreet (7 years)


Annotation: Data: Interbank indirect, EBS. Currencies: USDEUR. Period: 03.jan - 23. dec, 2005. Frequency: 10 min


A notation: Data: Citibank customer order flow. Presented at MNB 07


A notation: Data: EBS


A notation: Data: EBS


[330] Kaul, Aditya and Carmen Stefancu. “Liquidity comovement in the foreign exchange market”. typescript, ESSEC, 2011. URL https://docs.google.com/fileview?id=0B4MOMCV5yoaX2Q2ZjFkMWMtMTc2NC00MjM3LWI2MDktZTI4T1RhNm1xNzc2khl=en

A notation: Data: HDFD96 (Olsen and Associates half-hour data, covering 1996).

Annotation: Data: US Treasury


Annotation: Presented at the 5th EMG Microstructure Workshop


Annotation: Data: The LSE D2000-2 99-00 data set. Presented at the 1st Annual CB Workshop (BI/NB 05)


Annotation: Data: D2000-2 (LSE 99-00 data set)


29


Osler, Carol L. and Vitaliy Vandrovych. “Hedge funds and the origins of private information in currency markets”. typescript, Brandeis University, 2009.


Annotation: Data: Norges Bank data set

Annotation: Data: US Treasury data set


Annotation: Data: US Treasury data set

Annotation: Data: Yao dealer (all trades, inventories)

Annotation: Data: Yao dealer (all trades, inventories)

3 Books, articles, PhD dissertations, etc.


Annotation: An overview of functioning of FX markets.


**Annotation:** Every three years, in April, the BIS coordinates a global central bank survey of foreign exchange and derivatives market activity. In March 1986 the central banks BoE, Fed, BoJ and BoC conducted surveys of their respective markets. Since 1989, the BIS has conducted the survey with a much wider coverage every third year, and the full report is published the year after. The first (1989) was called “Survey of Foreign Exchange Market Activity”. From 1992 until 1998 the survey was called (a variant of) “Central Bank Survey of Foreign Exchange and Derivative Market Activity in April 199?”. Since 2002 the survey is named “Triennial Central Bank Survey of Foreign Exchange and Derivative Market Activity in 200?”. The first three surveys were limited to the foreign exchange markets (1989, 1992, 1995). Subsequently both the foreign exchange and the derivatives markets have been surveyed (1998, 2001, 2004, 2007). For the survey, each participating central bank collects data from the banks and dealers in its jurisdiction and calculates aggregate national data. These are provided to the BIS, which compiles global aggregates. See link for more information. See also the summary papers by Galati.


**Annotation:** Data: Norges Bank and Sveriges Riksbank data set


**Annotation:** Data: The Riksbank data


**Annotation:** Questionnaire survey. See also Cheung, Chinn and Marsh (2004, IJFE), Cheung and Wong (2000, JIE), and Cheung and Chinn (2001, JIMF).


[385] de Cecco, Marcello. “Genoese exchange fairs”. In Newman et al. [411], 221–22.
Annotation: Nice overview on how currency trading were conducted in the old days.


Annotation: Survey


Annotation: Data: D2000-1 (4 months, 1996)


Annotation: Survey


Annotation: Data: CitiBank customer order flow. First published paper on these data(?)


Annotation: Nice discussion on how markets work.


Annotation: Papers from a NBER conference

[396] Gereben, Aron. “Using the microstructure approach to foreign exchange markets at a central bank”. In Liebscher et al. [407].


Annotation: Data: D2000-2 (LSE one-day data). First study of electronic brokers in FX


[404] Hsieh, David A. and Allan W. Kleidon. “Bid-ask spreads in foreign exchange markets: Implications for models of asymmetric information”. In Frankel et al. [395], 41–65. URL: http://www.press.uchicago.edu/cgi-bin/hfs.cgi/00/13113.ctl

[405] Jorion, Phillipe. “Risk and turnover in the foreign exchange market”. In Frankel et al. [395], 19–37. URL http://www.press.uchicago.edu/cgi-bin/hfs.cgi/00/13113.ctl


[409] Lyons, Richard K. “Foreign exchange volume: Sound and fury signifying nothing?” In Frankel et al. [395], 183–201. URL http://www.press.uchicago.edu/cgi-bin/hfs.cgi/00/13113.ctl


Annotation: Survey with special emphasis on the empirical literature

[414] Perraudin, William and Paolo Vitale. “Interdealer trade and information flows in a decentralized foreign exchange market”. In Frankel et al. [395], 73–98. URL http://www.press.uchicago.edu/cgi-bin/hfs.cgi/00/13113.ctl

Annotation: Papers from a NBER conference


Annotation: Survey, with a special focus on electronic trading systems.


Annotation: Survey


Annotation: Chapter on FX microstructure.


Annotation: Among the first to apply microstructure tools to FX!

