

The impact of Swiss monetary developments on the international role of the Swiss franc

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- Growing use of foreign currencies in banks' lending and funding activities. Particularly pronounced in Eastern Europe.
 - Sizable retrenchment during the crisis, and pressure on exposed borrowers.
- What drives banking activity in foreign currency lending? Our understanding is still partial.
 - Macroeconomic fundamentals in funding currency country and local country. Possible spillovers across funding countries.
 - Are all funding currencies alike, or are some more used for risk taking?
- Assess the issue with a new and unique data on Swiss franc activity.

- Lending in foreign currencies in emerging countries.
 - FX activity is not pushed by foreign banks only, and is is demand from borrowers concerned about volatility of the local currency (Brown and de Haas 2012, Brown and Stix 2014, Fidrmuc, Hake and Stix 2013).
 - Distinction between local and foreign currency, but not across different foreign currencies.
 - Banks' lending in FX is not hedged by funding (Yesin 2013).
- International transmission through bank lending.
 - Sizable banks' retrenchment in the crisis (Avdjiev, Kuti and Takats 2012, Milesi-Ferretti and Tille 2011, Takats 2010).
 - Conditions of parent banks are transmitted to their foreign activities, and local affiliates can be used as funding sources (Cetorelli and Goldberg 2012, 2011).
 - Pattern could be different across funding currencies.

- We use a new multi-country dataset of banks' activities in local currency, the Swiss franc, and other foreign currencies.
- We construct estimates of capital flows on CHF and other foreign currencies by correcting for exchange rate valuation effects, using estimated composition of non-CHF foreign currency holdings.
- We assess the impact of monetary conditions, exchange rate developments, and real conditions.
 - The impact is highly heterogeneous. Euro activity is unaffected.
 - USD and CHF activity is significantly affected.
 - Suggests different determinants for activity in different currencies: Euro as a baseline driven by long-term structural factors, CHF and USD as alternatives used in riskier activities.

- 1 Motivation and literature
- 2 Data and stylized facts**
- 3 Framework
- 4 Explanatory variables
- 5 Results
- 6 Conclusion

The Swiss Franc Lending Monitor

- Aggregate balance sheet positions of banks domiciled in 18 European countries. Collected by SNB from central banks.
 - Quarterly figures from 2009Q1 to 2014Q2 (start in 2002Q1 for some countries). Banks allocated on the residency principle (subsidiaries of foreign banks are counted, but not branches).
- Assets and liabilities are split along several dimensions.
 - By currency: local currency, Swiss francs, all other FX.
 - By type of assets: lending (credits), and other assets.
 - By type of liabilities: deposits (including repo and interbank), own securities issuance, and other liabilities.
 - Lending and deposits further divided by type of counterparty (households and non-financial firms vs. banks).
- Focus on 11 countries, exclude domestic interbank and domestic government (unavailable or negligible).

- The use of CHF is very heterogeneous across countries
 - Assets: above 20 % of GDP in Hungary and Austria, 10 % in Croatia, smaller in others.
 - Liabilities: above 10 % of GDP Hungary and Austria, 4-6 % in UK, Slovenia, Croatia, smaller for others
- CHF assets are primarily in lending to households, some role of interbank (Greece, Austria, advanced countries).
- CHF liabilities are primarily to foreign banks, some role of own securities (Austria).
- Banks are long in CHF: 80 % of CHF assets not funded in Greece, 60 % in Austria, Bulgaria, Hungary.
- The share of the CHF in foreign currency activity has trended down.

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Dynamics of positions

- The change in position reflects flows and exchange rate valuation.

$$\dot{j}_t^{c,j} = f_t^{c,j} + \dot{e}_t^{c,j}$$

- c denotes country, j currency, $\dot{j}_t^{c,j} = dL_t^{c,j}/L_{t-1}^{c,j}$ is the change in position L , capital flows are $f_t^{c,j} = F_t^{c,j}/L_{t-1}^{c,j}$, and $\dot{e}_t^{c,j} = de_t^{c,j}/e_{t-1}^{c,j}$ the valuation effect (a higher e is a depreciation of currency c).
- There is one relation for CHF positions and one for all other currencies. $\varpi^{c,j}$ is share of foreign currency j in non-CHF foreign positions in country c .

$$\begin{aligned} \dot{j}_t^{c,CH} &= f_t^{c,CH} + \dot{e}_t^{c,CH} \\ \dot{j}_t^{c,FX} &= f_t^{c,FX} + \sum_j \varpi^{c,j} \dot{e}_t^{c,j} \end{aligned}$$

- We link the flows f to drivers in Switzerland, m_t^{CH} , the local economy, m_t^c , the U.S., m_t^{USD} , and the euro area, m_t^{Euro} .
- Flow in CHF, $f_t^{c,CH}$, are computed from the changes in positions and the CHF exchange rate (both observed):

$$f_t^{c,CH} = \alpha_{CH}^{CH} m_t^{CH} + \alpha_{CH}^{USD} m_t^{USD} + \alpha_{CH}^{Euro} m_t^{Euro} + \alpha_{CH}^c m_t^c$$

- We use $\varpi^{c,j}$ to assess the direct effect of (say) Euro fundamentals through Euro positions and the indirect effect through US positions.
 - Specifically, $\tilde{m}_t^{c,k,j} = m_t^k \varpi^{c,j}$ is a impact of fundamental in k (USD, Euro) through holdings denominated in currency j . The impact of US fundamentals is directly through dollar positions, $\tilde{m}_t^{c,USD,USD}$, and indirectly through Euro positions, $\tilde{m}_t^{c,USD,Euro}$.

Specification for non-CHF flows

- The impact of Swiss, US, Euro and local fundamentals on flows in non-CHF foreign currencies is:

$$\begin{aligned} f_t^{c,FX} = & \alpha_{Euro}^{CH} \tilde{m}_t^{c,CH,Euro} + \alpha_{USD}^{CH} \tilde{m}_t^{c,CH,USD} \\ & + \alpha_{Euro}^{Euro} \tilde{m}_t^{c,Euro,Euro} + \alpha_{USD}^{Euro} \tilde{m}_t^{c,Euro,USD} \\ & + \alpha_{Euro}^{USD} \tilde{m}_t^{c,USD,Euro} + \alpha_{USD}^{USD} \tilde{m}_t^{c,USD,USD} \\ & + \alpha_{Euro}^c \tilde{m}_t^{c,c,Euro} + \alpha_{USD}^c \tilde{m}_t^{c,c,USD} \end{aligned}$$

- We observe positions in all non-CHF currencies, and specific exchange rates. The $\varpi^{c,j}$ are needed to get the flows in all non-CHF foreign currencies.
 - We compute them using a) data from the ECB *International use of the Euro*, b) data from National central banks, c) coefficients from regressions of changes in positions on exchange rates (assumes that exchange rates affects flows with a lag).

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Indicators of monetary conditions and exchange rates

- The crisis saw an active reaction by central banks. We proxy it by quantity and price measures, as well as measures of actions targeted to the foreign exchange market.
 - Quantity: change in $M0$ to GDP (CH, US, Euro).
 - Price: change in money market spread (3 months Libor - 3 months OIS).
 - FX measures: swaps to foreign central banks (% of core country GDP) by the Swiss National Bank and the Fed; dummy for 2001Q3 for the introduction of the CHF - Euro floor.
- Exchange rate movements affect the incentive to take or extent foreign currency lending.
 - Percent appreciation of the CHF (USD) in the previous quarter.
 - Daily volatility of the exchange rate vis-à-vis the CHF (USD, Euro) in the previous quarter.
 - Dummy since 2011Q3 for the introduction of the CHF - Euro floor (also dummy for 2011Q3, and for 2011Q4 for temporary effects).

- Real conditions are proxied by lagged GDP growth, both in the funding countries (supply) and the receiving country (demand).
 - Growth in local currency assets of banks proxy domestic conditions.
- Conditions in global financial markets have been found to matter in the literature.
 - Level of the VIX index in the currency quarter.
 - Broker-dealer leverage was also tried, but proved highly sensitive to the sample.

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CHF assets and liabilities

- Impact on overall assets and liabilities, as well as selected subcategories. Contrast quantity and price measures of monetary conditions.
- CHF assets are impacted.
 - A tightening of Swiss spreads raises CHF activity (unexpected sign). Some impact of US conditions, and Euro conditions (quantity).
 - CHF activity raises when the Euro appreciates or the USD exchange rate volatility falls.
 - The CHF-Euro floor reduced the CHF activity. A higher Vix raises CHF activity (unexpected).
- CHF liabilities are impacted.
 - Swaps by the SNB supporter CHF deposits.
 - CHF deposits rose when the Euro strengthened, the CHF weakened, and the volatility vis-a-vis de dollar fell.

CHF assets: monetary conditions

Table 2A. Swiss franc inflows into asset in foreign banks

Explanatory Variable	Total Assets		Lending to non-bank residents	
	Reg	Price Reg	Quantity Reg	Price Reg
constant	0.03	-0.04	0.01	-0.03
d(Swiss M0 in %GDP) (-1)	-0.19		-0.14	
Swiss Franc Money Market Spread (-1)		0.26 **		0.19 *
Dummy(Swiss SWAP) * Swiss Swap Volume in %GDP (-)	-0.05	-0.38	-0.19	-0.39
d(US M0 in %GDP) (-1)	-1.09		-1.27	
USD Money Market Spread (-1)		0.05		0.09 ***
US FX Swap Volume in %GDP	-8.52 *	0.58	-4.73	2.82
d(Eurozone M0 in %GDP) (-1)	2.37 **		1.59	
EUR Money Market Spread (-1)		-0.08		-0.09
Appreciation of Swiss Franc (-1)	-0.01	-0.04	0.19	0.14
Appreciation of USD (-1)	0.00	0.11	0.09	0.17
Appreciation of EUR (-1)	0.88 **	0.75 *	0.87 **	0.77 **
Swiss franc daily exchange rate volatility (-1)	46.8	19.6	133	194
USD daily exchange rate volatility (-1)	-756 *	-506	-714 **	-550 *
Dummy Swiss Franc Floor	-0.16 ***	-0.09 *	-0.11 **	-0.05
Dummy for 2011 Q3	0.00	-0.03	-0.02	-0.04
Dummy for 2011 Q4	0.09	0.09	0.05	0.04
Quarterly Swiss Real GDP Growth (-1)	-8.37	-3.33	-0.78	5.17
Quarterly US Real GDP Growth (-1)	2.11	2.51	-3.18	-5.21
Quarterly Eurozone Real GDP Growth (-1)	-6.69	-1.73	-3.18	0.82
Growth in local currency assets	0.36 *	0.31	0.31 *	0.22
Quarterly Domestic Real GDP Growth (-1)	1.43 *	1.57 *	0.81	1.08
VIX	0.01 ***	0.005 ***	0.005 ***	0.003 **
Dummy for the post "ALL IT TAKES" period	0.09 *	0.05	0.07 *	0.03
Dummy Postfinance (-1)	0.06		0.04	
Number of observations	219	219	219	219
Number of cross sections	9	9	9	9
R-Squared	32	34	37	41

CHF assets: exchange rates

Table 2A. Swiss franc inflows into asset in foreign banks

Explanatory Variable	Total Assets		Lending to non-bank residents	
	Reg	Price Reg	Quantity Reg	Price Reg
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CHF assets: exchange rate floor

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	Reg	Price Reg	Quantity Reg	Price Reg
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Swiss Franc Money Market Spread (-1)		0.26 **		0.19 *
Dummy(Swiss SWAP) * Swiss Swap Volume in %GDP (-1)	-0.05	-0.38	-0.19	-0.39
d(US M0 in %GDP) (-1)	-1.09		-1.27	
USD Money Market Spread (-1)		0.05		0.09 ***
US FX Swap Volume in %GDP	-8.52 *	0.58	-4.73	2.82
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EUR Money Market Spread (-1)		-0.08		-0.09
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Swiss franc daily exchange rate volatility (-1)	46.8	19.6	133	194
USD daily exchange rate volatility (-1)	-756 *	-506	-714 **	-550 *
Dummy Swiss Franc Floor	-0.16 ***	-0.09 *	-0.11 **	-0.05
Dummy for 2011 Q3	0.00	-0.03	-0.02	-0.04
Dummy for 2011 Q4	0.09	0.09	0.05	0.04
Quarterly Swiss Real GDP Growth (-1)	-8.37	-3.33	-0.78	5.17
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VIX	0.01 ***	0.005 ***	0.005 ***	0.003 **
Dummy for the post "ALL IT TAKES" period	0.09 *	0.05	0.07 *	0.03
Dummy Postfinance (-1)	0.06		0.04	
Number of observations	219	219	219	219
Number of cross sections	9	9	9	9
R-Squared	32	34	37	41

CHF liabilities: monetary conditions

Table 2B. Swiss franc inflows into liabilities in foreign banks

Explanatory Variable	Total Liabilities		Foreign interbank borrowing		Deposits from resident non-bank	
	Quantity Reg	Price Reg	Quantity Reg	Price Reg	Quantity Reg	Price Reg
constant	-0.02	-0.04	-3.28 *	-2.74 *	0.09	0.09
d(Swiss M0 in %GDP) (-1)	-0.23		2.28		0.48	
Swiss Franc Money Market Spread (-1)		0.44 **		2.3		-0.90 ***
Dummy(Swiss SWAP) * Swiss Swap Volume in %G	-0.59	-0.58	5.72	2.65	2.80 **	2.95 **
d(US M0 in %GDP) (-1)	-3.44 *		-4.84		-0.93	
USD Money Market Spread (-1)		0.05		-0.26		0.15 **
US FX Swap Volume in %GDP	-2.41	1.79	108	106	-10.7	-4.32
d(Eurozone M0 in %GDP) (-1)	-0.11		17.07		0.41	
EUR Money Market Spread (-1)		-0.14		-1.07		0.42 ***
Appreciation of Swiss Franc (-1)	-0.18	-0.24	-2.55	-3.59	-0.86 **	-0.82 **
Appreciation of USD (-1)	-0.20	-0.10	-6.97	-5.61	0.14	-0.12
Appreciation of EUR (-1)	1.01	0.88	7.89	6.44	1.95 **	2.19 ***
Swiss franc daily exchange rate volatility (-1)	30.3	-41	8508	7210	529	527
USD daily exchange rate volatility (-1)	-1041	-726	-6681	-6338	-1947 **	-2259 ***
Dummy Swiss Franc Floor	-0.16	-0.18 **	-0.08	-0.47	-0.13	0.08
Dummy for 2011 Q3	-0.03	0.0	-0.56	-0.17	-0.08	-0.17
Dummy for 2011 Q4	0.18	0.25 **	0.39	1.75	-0.07	-0.36 **
Quarterly Swiss Real GDP Growth (-1)	-20.0 **	-12.8	118	57.3	-28.9 **	-10.77
Quarterly US Real GDP Growth (-1)	10.3	10.0	125	155	15.8 *	9.25
Quarterly Eurozone Real GDP Growth (-1)	-2.17	-3.94	-47.2	-58.3	-1.14	-2.56
Growth in local currency assets	0.28	0.27	0.16	0.20	0.26	0.51
Quarterly Domestic Real GDP Growth (-1)	2.06	1.75	7.16	7.86	2.08	2.28
VIX	0.01 ***	0.007 **	0.09 *	0.08 *	0.01 **	0.00
Dummy for the post "ALL IT TAKES" period	0.09	0.10	1.67	1.50	0.00	-0.21 **
Dummy Postfinance (-1)	0.06		-1.00		0.08	
Number of observations	219	219	219	219	219	219
Number of cross sections	9	9	9	9	9	9
R-Squared	22	25	10	10	21	26

CHF liabilities: exchange rates

Table 2B. Swiss franc inflows into liabilities in foreign banks

Explanatory Variable	Total Liabilities		Foreign interbank borrowing		Deposits from resident non-bank	
	Quantity	Price Reg	Quantity Reg	Price Reg	Quantity Reg	Price Reg
	Reg					
constant	-0.02	-0.04	-3.28 *	-2.74 *	0.09	0.09
d(Swiss M0 in %GDP) (-1)	-0.23		2.28		0.48	
Swiss Franc Money Market Spread (-1)		0.44 **		2.3		-0.90 ***
Dummy(Swiss SWAP) * Swiss Swap Volume in %G	-0.59	-0.58	5.72	2.65	2.80 **	2.95 **
d(US M0 in %GDP) (-1)	-3.44 *		-4.84		-0.93	
USD Money Market Spread (-1)		0.05		-0.26		0.15 **
US FX Swap Volume in %GDP	-2.41	1.79	108	106	-10.7	-4.32
d(Eurozone M0 in %GDP) (-1)	-0.11		17.07		0.41	
EUR Money Market Spread (-1)		-0.14		-1.07		0.42 ***
Appreciation of Swiss Franc (-1)	-0.18	-0.24	-2.55	-3.59	-0.86 **	-0.82 **
Appreciation of USD (-1)	-0.20	-0.10	-6.97	-5.61	0.14	-0.12
Appreciation of EUR (-1)	1.01	0.88	7.89	6.44	1.95 **	2.19 ***
Swiss franc daily exchange rate volatility (-1)	30.3	-41	8508	7210	529	527
USD daily exchange rate volatility (-1)	-1041	-726	-6681	-6338	-1947 **	-2259 ***
Dummy Swiss Franc Floor	-0.16	-0.18 **	-0.08	-0.47	-0.13	0.08
Dummy for 2011 Q3	-0.03	0.0	-0.56	-0.17	-0.08	-0.17
Dummy for 2011 Q4	0.18	0.25 **	0.39	1.75	-0.07	-0.36 **
Quarterly Swiss Real GDP Growth (-1)	-20.0 **	-12.8	118	57.3	-28.9 **	-10.77
Quarterly US Real GDP Growth (-1)	10.3	10.0	125	155	15.8 *	9.25
Quarterly Eurozone Real GDP Growth (-1)	-2.17	-3.94	-47.2	-58.3	-1.14	-2.56
Growth in local currency assets	0.28	0.27	0.16	0.20	0.26	0.51
Quarterly Domestic Real GDP Growth (-1)	2.06	1.75	7.16	7.86	2.08	2.28
VIX	0.01 ***	0.007 **	0.09 *	0.08 *	0.01 **	0.00
Dummy for the post "ALL IT TAKES" period	0.09	0.10	1.67	1.50	0.00	-0.21 **
Dummy Postfinance (-1)	0.06		-1.00		0.08	
Number of observations	219	219	219	219	219	219
Number of cross sections	9	9	9	9	9	9
R-Squared	22	25	10	10	21	26

A tentative interpretation

- The bulk of FX positions in our sample countries are in Euro. The Euro could thus be seen as the baseline option for foreign currency activity, with the CHF (and the USD) as alternative for risk-taking behavior.
- Patterns on the asset side.
 - A more stable dollar makes risk taking more appealing, and supports CHF activity (the Vix impact is however puzzling).
 - The CHF-Euro floor has made the CHF more similar to the Euro, and thus reduced its appeal as an alternative foreign currency.
- Patterns on the liability side.
 - A more stable dollar makes risk taking more appealing, and leads households to increase their CHF deposits.
 - With most deposits in euro, a stronger euro has a wealth effect and makes risk-taking less of a concern.
 - A stronger CHF makes entering the risk-taking currency more costly, and reduces CHF deposits.

- USD assets are impacted.
 - A tightening of Swiss spreads lowers USD activity. US quantity conditions matter.
 - The CHF-Euro floor led to higher USD lending, but the effect proved temporary.

- Euro assets are not impacted
 - Euro activity is insensitive to the various drivers considered.

Other FX assets through USD: monetary conditions

Table 3A. Other foreign currency inflows into asset in foreign banks

Explanatory Variable	Total Assets		Lending to non-bank residents	
	Quantity Reg	Price Reg	Quantity Reg	Price Reg
constant	-0.02	-0.07	-0.09	-0.14 **
Interacted with US currency weight				
d(Swiss M0 in %GDP) (-1)	0.04		-1.07 *	
Swiss Franc Money Market Spread (-1)		-0.86 ***		-0.55 **
Dummy(Swiss SWAP) * Swiss Swap Volume in %GDF	0.34	-1.76	-1.50	-1.83
d(US M0 in %GDP) (-1)	6.36 ***		1.39	
USD Money Market Spread (-1)		0.03		0.07
US FX Swap Volume in %GDP	0.38	21.0 **	25.2 *	30.2 **
d(Eurozone M0 in %GDP) (-1)	7.23 ***		6.41 **	
EUR Money Market Spread (-1)		0.42 ***		0.28 *
Appreciation of Swiss Franc (-1)	0.96	1.42 *	0.52	-0.21
Appreciation of USD (-1)	-0.29	-0.24	-0.62	-1.12 **
Appreciation of EUR (-1)	-2.78	-1.41	-1.26	-0.98
Swiss franc daily exchange rate volatility (-1)	-654	-1341	154	-1817
USD daily exchange rate volatility (-1)	2264	2577 *	1423	3316 *
Dummy Swiss Franc Floor	-0.30 ***	0.02	-0.18	0.12
Dummy for 2011 Q3	0.52 **	0.42 *	0.37	0.32
Dummy for 2011 Q4	0.40 **	0.08	0.60 ***	0.22
Quarterly Swiss Real GDP Growth (-1)	22.8 **	20.6	50.1 ***	47.7 ***
Quarterly US Real GDP Growth (-1)	17.1 **	14.9 *	23.5 ***	20.0 **
Quarterly Eurozone Real GDP Growth (-1)	-29.4 ***	-2.88	-33.7 ***	-16.5 *
Growth in local currency assets	-0.77	0.24	-1.92 ***	-1.52 **
Quarterly Domestic Real GDP Growth (-1)	0.09	-0.13	-0.38	0.55
VIX	0.00	0.00	0.00	0.00
Dummy for the post "ALL IT TAKES" period	0.25 ***	0.00	0.11	-0.18 *
Dummy Postfinance (-1)	-0.11		-0.04	

Other FX assets through USD: exchange rate floor

Table 3A. Other foreign currency inflows into asset in foreign banks

Explanatory Variable	Total Assets		Lending to non-bank residents	
	Quantity Reg	Price Reg	Quantity Reg	Price Reg
constant	-0.02	-0.07	-0.09	-0.14 **
d(Swiss M0 in %GDP) (-1)	0.04		-1.07 *	
Swiss Franc Money Market Spread (-1)		-0.86 ***		-0.55 **
Dummy(Swiss SWAP) * Swiss Swap Volume in %GDF	0.34	-1.76	-1.50	-1.83
d(US M0 in %GDP) (-1)	6.36 ***		1.39	
USD Money Market Spread (-1)		0.03		0.07
US FX Swap Volume in %GDP	0.38	21.0 **	25.2 *	30.2 **
d(Eurozone M0 in %GDP) (-1)	7.23 ***		6.41 **	
EUR Money Market Spread (-1)		0.42 ***		0.28 *
Appreciation of Swiss Franc (-1)	0.96	1.42 *	0.52	-0.21
Appreciation of USD (-1)	-0.29	-0.24	-0.62	-1.12 **
Appreciation of EUR (-1)	-2.78	-1.41	-1.26	-0.98
Swiss franc daily exchange rate volatility (-1)	-654	-1341	154	-1817
USD daily exchange rate volatility (-1)	2264	2577 *	1423	3316 *
Dummy Swiss Franc Floor	-0.30 ***	0.02	-0.18	0.12
Dummy for 2011 Q3	0.52 **	0.42 *	0.37	0.32
Dummy for 2011 Q4	0.40 **	0.08	0.60 ***	0.22
Quarterly Swiss Real GDP Growth (-1)	22.8 **	20.6	50.1 ***	47.7 ***
Quarterly US Real GDP Growth (-1)	17.1 **	14.9 *	23.5 ***	20.0 **
Quarterly Eurozone Real GDP Growth (-1)	-29.4 ***	-2.88	-33.7 ***	-16.5 *
Growth in local currency assets	-0.77	0.24	-1.92 ***	-1.52 **
Quarterly Domestic Real GDP Growth (-1)	0.09	-0.13	-0.38	0.55
VIX	0.00	0.00	0.00	0.00
Dummy for the post "ALL IT TAKES" period	0.25 ***	0.00	0.11	-0.18 *
Dummy Postfinance (-1)	-0.11		-0.04	

Other FX assets through Euro

Table 3A, continued. Other foreign currency inflows into asset in foreign banks

Explanatory Variable	Total Assets		Lending to non-bank residents	
	Quantity Reg	Price Reg	Quantity Reg	Price Reg
Interacted with EUR currency weights				
d(Swiss M0 in %GDP) (-1)	-0.18		-0.03	
Swiss Franc Money Market Spread (-1)		-0.05		-0.05
Dummy(Swiss SWAP) * Swiss Swap Volume in %GDP	-2.30	-1.89	-1.64	-1.49
d(US M0 in %GDP) (-1)	-0.77		0.13	
USD Money Market Spread (-1)		0.05		0.06
US FX Swap Volume in %GDP	0.33	5.09	-0.06	5.94
d(Eurozone M0 in %GDP) (-1)	0.70		0.83	
EUR Money Market Spread (-1)		0.06		0.04
Appreciation of Swiss Franc (-1)	-0.35	-0.28	0.03	0.17
Appreciation of USD (-1)	-0.21	-0.30	-0.17	-0.18
Appreciation of EUR (-1)	1.38 **	1.32 *	0.82	0.81
Swiss franc daily exchange rate volatility (-1)	30.4	120	-72.4	272
USD daily exchange rate volatility (-1)	-404	-364	-106	-416
Dummy Swiss Franc Floor	-0.07	0.01	-0.06	0.02
Dummy for 2011 Q3	0.03	-0.03	0.04	-0.05
Dummy for 2011 Q4	0.10	0.01	0.09	0.01
Quarterly Swiss Real GDP Growth (-1)	-6.12	2.68	-0.49	6.19
Quarterly US Real GDP Growth (-1)	1.87	-0.08	-1.01	-2.73
Quarterly Eurozone Real GDP Growth (-1)	-0.28	0.90	-1.47	0.70
Growth in local currency assets	0.12	-0.08	0.10	-0.03
Quarterly Domestic Real GDP Growth (-1)	0.72	0.92	0.92	1.31
VIX	0.00	0.00	0.00	0.00
Dummy for the post "ALL IT TAKES" period	0.05	-0.01	0.03	-0.02
Dummy Postfinance (-1)	0.02		0.02	
Number of observations	219	219	219	219
Number of cross sections	9	9	9	9
R-Squared	41	36	46	46

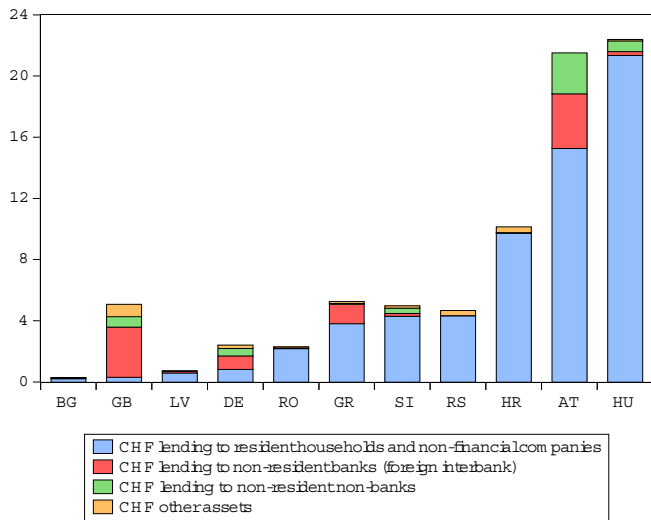
- 1 Motivation and literature
- 2 Data and stylized facts
- 3 Framework
- 4 Explanatory variables
- 5 Results
- 6 Conclusion**

- This novel dataset has allowed us to focus on the relative patterns of the Swiss franc versus other currencies.
- We find that Swiss financial developments matter little for foreign banks' use of Swiss francs. Global developments matter more.
- The impact of global factors and exchange rate developments differs across currencies.
 - Euro activity is insensitive to these conditions.
 - USD and CHF activity are significantly and similarly affected.
- Tentative interpretation:
 - The Euro is a quasi-domestic currency in CEE countries. Other currencies are for risk-taking.
 - Risk taking is driven by global conditions and monetary policy in major currency areas, not necessarily by monetary conditions in the funding currency home country.

- Work on specification.
 - What monetary and financial variables are important? (interest rate spread).
 - Parsimonious specification and the general to specific approach.

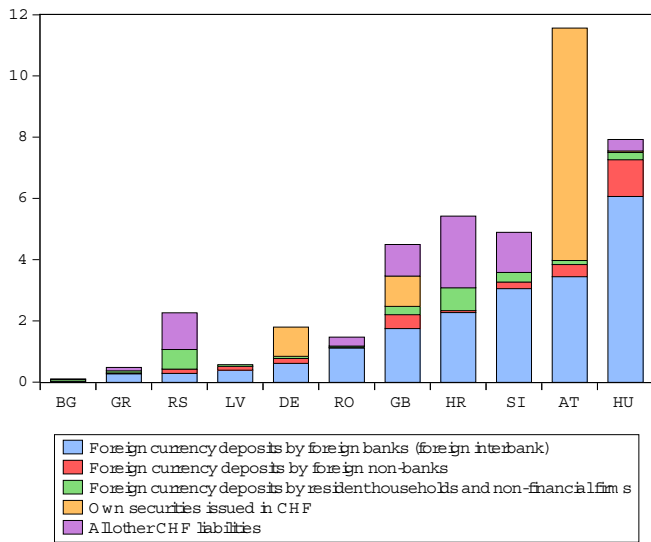
- Robustness tests, including split into euro and non-euro sub-samples.

Stylized Facts 1, Figure 1



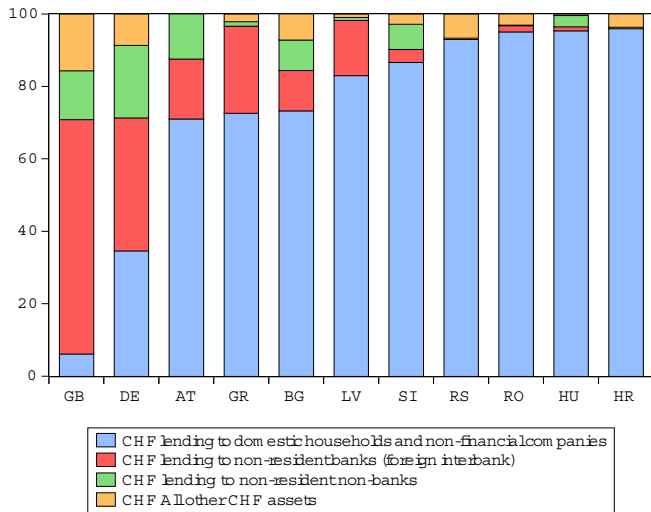
Swiss franc total assets by types (Q2 2014, percent of GDP)

Stylized Facts 1, Figure 2



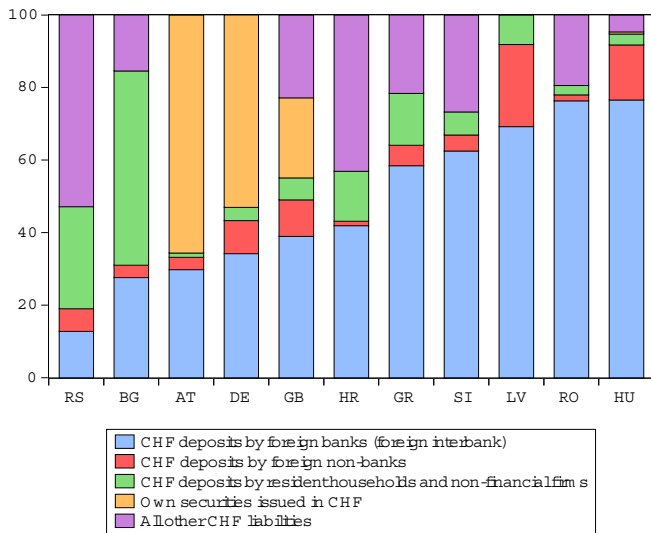
Swiss franc total liabilities by types (Q2 2014, percent of GDP)

Stylized Facts 2, Figure 3

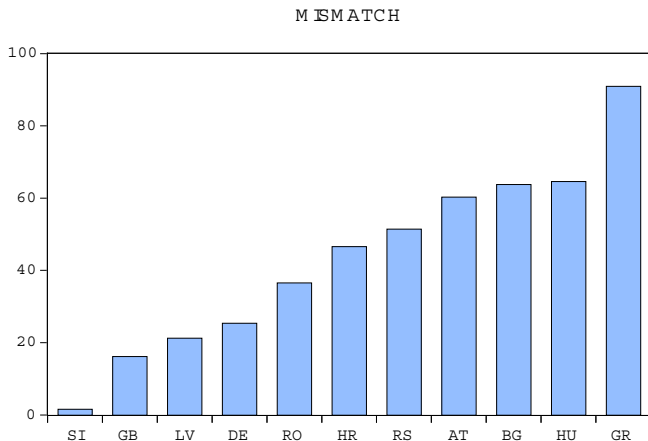


Composition of Swiss franc total assets (Q2 2014)

Stylized Facts 3, Figure 4

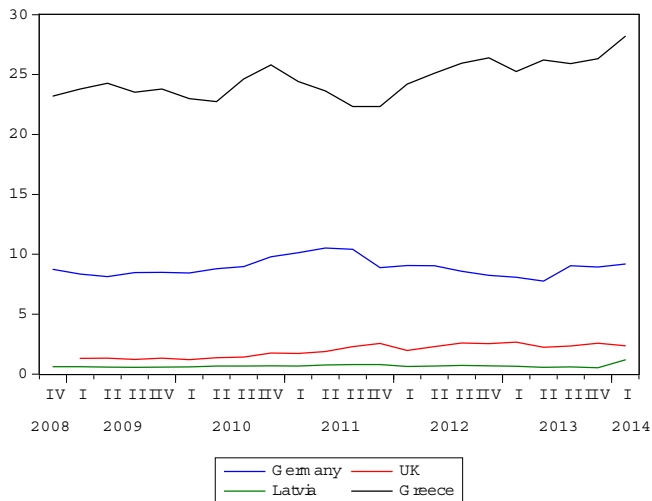


Composition of Swiss franc total liabilities (Q2 2014)



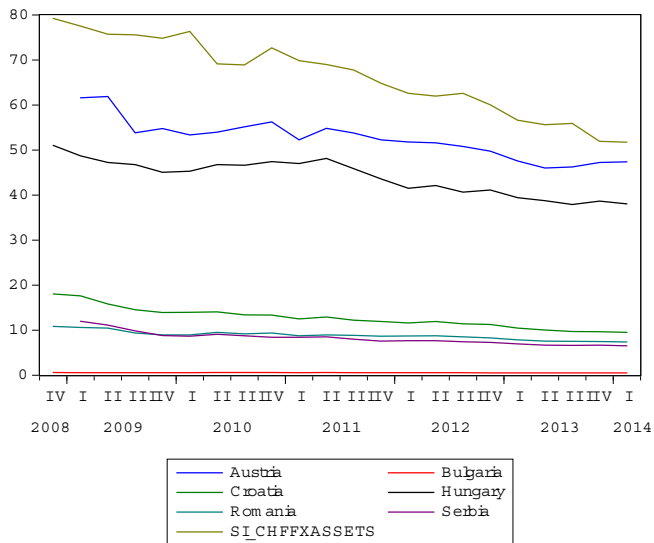
Composition of Swiss franc total liabilities (Q2 2014)

Stylized Facts 5, Figure 6a



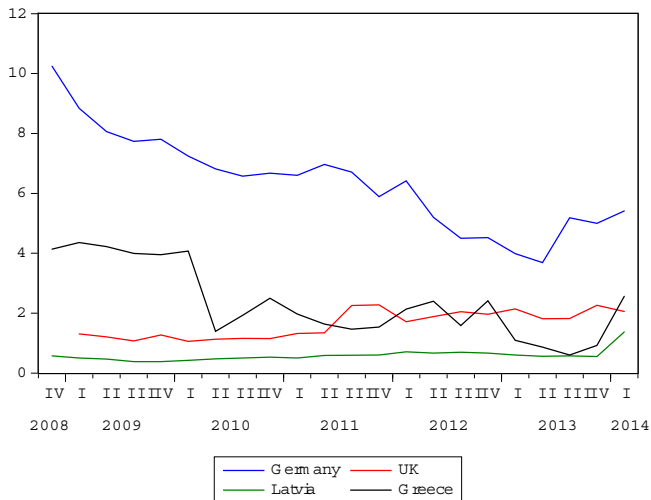
Swiss franc positions in % of total FX positions.

Stylized Facts 5, Figure 6b



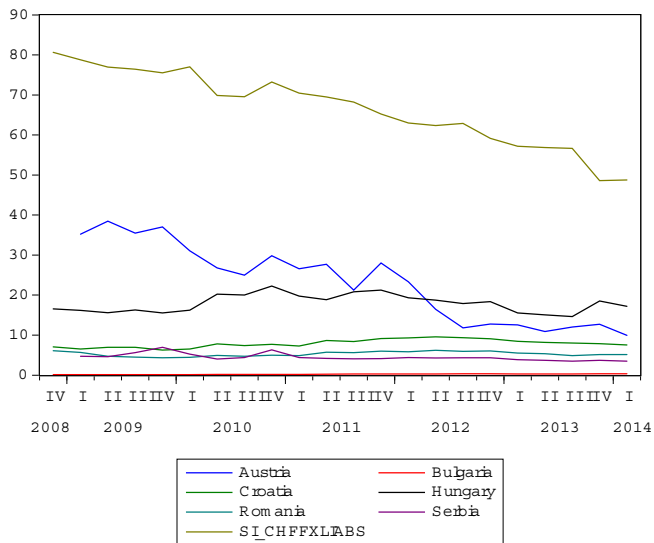
Swiss franc positions in % of total FX positions.

Stylized Facts 5, Figure 6c



Swiss franc positions in % of total FX positions.

Stylized Facts 5, Figure 6d



Swiss franc positions in % of total FX positions.

Table 1a

Table 1. Currency Weights (A)

Bulgaria	CHF		Euro		USD		Pound		Yen	
	Asset	Liability	Asset	Liability	Asset	Liability	Asset	Liability	Asset	Liability
Weights used, in total FX	1%	0%	99%	100%	0%	0%	0%	0%	0%	0%
Weights used, in non-CHF FX	0%	0%	100%	100%	0%	0%	0%	0%	0%	0%

The ECB indicates an overwhelming role for the Euro, so we assume that all positions in foreign currency other than the Swiss franc are in Euro.

Croatia	CHF		Euro		USD		Pound		Yen	
	Asset	Liability	Asset	Liability	Asset	Liability	Asset	Liability	Asset	Liability
Weights used, in total FX	13%	8%	87%	92%	0%	0%	0%	0%	0%	0%
Weights used, in non-CHF FX	0%	0%	100%	100%	0%	0%	0%	0%	0%	0%

The ECB indicates an overwhelming role for the Euro, so we assume that all positions in foreign currency other than the Swiss franc are in Euro.

Hungary	CHF		Euro		USD		Pound		Yen	
	Asset	Liability	Asset	Liability	Asset	Liability	Asset	Liability	Asset	Liability
Weights used, in total FX	44%	18%	37%	76%	19%	6%	0%	0%	0%	0%
Weights used, in non-CHF FX	0%	0%	66%	92%	34%	8%	0%	0%	0%	0%

The ECB, national source, and regression analysis give similar weights. As the US dollar plays a role, we consider the shares computed from the regression analysis.

Latvia	CHF		Euro		USD		Pound		Yen	
	Asset	Liability	Asset	Liability	Asset	Liability	Asset	Liability	Asset	Liability
Weights used, in total FX	1%	1%	96%	86%	3%	13%	0%	0%	0%	0%
Weights used, in non-CHF FX	0%	0%	97%	87%	3%	13%	0%	0%	0%	0%

The ECB indicates a strong role for the Euro, and some role for the US dollar. We use the shares from the ECB, and allocate the positions in foreign currencies other than the Swiss franc across Euro and US dollar in all subcategories by using their respective shares in the aggregate (that is 96/(96+3) for assets and 86/(86+13) for liabilities).

Romania	CHF		Euro		USD		Pound		Yen	
	Asset	Liability	Asset	Liability	Asset	Liability	Asset	Liability	Asset	Liability
Weights used, in total FX	9%	5%	87%	87%	4%	8%	0%	0%	0%	0%
Weights used, in non-CHF FX	0%	0%	96%	92%	4%	8%	0%	0%	0%	0%

The ECB indicates a strong role for the Euro, and some role for the US dollar. We use the shares from the ECB, and allocate the positions in foreign currencies other than the Swiss franc across Euro and US dollar in all subcategories by using their respective shares in the aggregate (that is 87/(87+4) for assets and 87/(87+8) for liabilities).

Table 1b

Table 1. Currency Weights (B)

Serbia	CHF		Euro		USD		Pound		Yen	
	Asset	Liability	Asset	Liability	Asset	Liability	Asset	Liability	Asset	Liability
Weights used, in total FX	8%	4%	81%	90%	11%	6%	0%	0%	0%	0%
Weights used, in non-CHF FX	0%	0%	88%	94%	12%	6%	0%	0%	0%	0%

The ECB indicates a strong role for the Euro, and some role for the US dollar. We use the shares from the ECB, and allocate the positions in foreign currencies other than the Swiss franc across Euro and US dollar in all subcategories by using their respective shares in the aggregate (that is $81/(81+11)$ for assets and $90/(90+6)$ for liabilities).

Austria	CHF		Euro		USD		Pound		Yen	
	Asset	Liability	Asset	Liability	Asset	Liability	Asset	Liability	Asset	Liability
Weights used, in total FX	52%	22%	0%	0%	0%	0%	0%	0%	48%	78%
Weights used, in non-CHF FX	0%	0%	0%	0%	0%	0%	0%	0%	100%	100%

National source indicate that the positions in foreign currencies other than the Swiss franc are in yen.

Germany	CHF		Euro		USD		Pound		Yen	
	Asset	Liability	Asset	Liability	Asset	Liability	Asset	Liability	Asset	Liability
Weights used, in total FX	9%	6%	0%	0%	71%	79%	15%	13%	5%	3%
Weights used, in non-CHF FX	0%	0%	0%	0%	78%	84%	16%	14%	6%	3%

National sources indicate a strong role for the US dollar, and some role for the Pound and the yen. We use the shares from the Bundesbank, and allocate the positions in foreign currencies other than the Swiss franc across US dollar Pound and Yen in all subcategories by using their respective shares in the aggregate (that is $68/(68+14+5)$; $14/(68+14+5)$; $5/(68+14+5)$ for assets and $62/(62+10+2)$; $10/(62+10+2)$; $2/(62+10+2)$ for liabilities).

United Kingdom	CHF		Euro		USD		Pound		Yen	
	Asset	Liability	Asset	Liability	Asset	Liability	Asset	Liability	Asset	Liability
Weights used, in total FX	2%	2%	63%	64%	35%	34%	0%	0%	0%	0%
Weights used, in non-CHF FX	0%	0%	65%	65%	35%	35%	0%	0%	0%	0%

The ECB, and regression analysis give similar weights. As the US dollar plays a role, we consider the shares computed from the regression analysis.

Table 1. Currency Weights (C)

Greece	CHF		Euro		USD		Pound		Yen	
	Asset	Liability	Asset	Liability	Asset	Liability	Asset	Liability	Asset	Liability
Weights used, in total FX	25%	2%	0%	0%	73%	81%	0%	4%	2%	12%
Weights used, in non-CHF FX	0%	0%	0%	0%	97%	83%	0%	4%	3%	12%

National sources indicate a role for the US dollar. We use the shares from the Bank of Greece and allocate the positions in foreign currencies other than the Swiss franc across US dollar Pound and Yen in all subcategories by using their respective shares in the aggregate (that is $63/(63+11)$; $11/(63+11)$ for assets and $74/(74+4)$; $4/(74+4)$ for liabilities).

Slovenia	CHF		Euro		USD		Pound		Yen	
	Asset	Liability	Asset	Liability	Asset	Liability	Asset	Liability	Asset	Liability
Weights used, in total FX	66%	66%	0%	0%	34%	34%	0%	0%	0%	0%
Weights used, in non-CHF FX	0%	0%	0%	0%	100%	100%	0%	0%	0%	0%

The ECB indicates that the foreign exchange positions are in Swiss franc or US dollar. We allocate all the positions in foreign currencies other than the Swiss franc in US dollar.

For each country, the first row shows the percentage allocation of foreign currency assets (and liabilities) between the Swiss Franc, the Euro, the US Dollar, the British Pound, and the Yen. The second row show the allocation across the foreign currencies other than the Swiss franc, corresponding to the weight $\alpha^{i,j}$ in the regressions

The shares combine three sources: the ECB *International role of the euro* publication, information from national central banks, and a regression of the change in positions in foreign currencies other than the Swiss franc on the respective exchange rates.

Table 2a

Table 2A. Swiss franc inflows into asset in foreign banks

Explanatory Variable	Total Assets		Lending to non-bank residents	
	Reg	Price Reg	Quantity Reg	Price Reg
constant	0.03	-0.04	0.01	-0.03
d(Swiss M0 in %GDP) (-1)	-0.19		-0.14	
Swiss Franc Money Market Spread (-1)		0.26 **		0.19 *
Dummy(Swiss SWAP) * Swiss Swap Volume in %GDP (-1)	-0.05	-0.38	-0.19	-0.39
d(US M0 in %GDP) (-1)	-1.09		-1.27	
USD Money Market Spread (-1)		0.05		0.09 ***
US FX Swap Volume in %GDP	-8.52 *	0.58	-4.73	2.82
d(Eurozone M0 in %GDP) (-1)	2.37 **		1.59	
EUR Money Market Spread (-1)		-0.08		-0.09
Appreciation of Swiss Franc (-1)	-0.01	-0.04	0.19	0.14
Appreciation of USD (-1)	0.00	0.11	0.09	0.17
Appreciation of EUR (-1)	0.88 **	0.75 *	0.87 **	0.77 **
Swiss franc daily exchange rate volatility (-1)	46.8	19.6	133	194
USD daily exchange rate volatility (-1)	-756 *	-506	-714 **	-550 *
Dummy Swiss Franc Floor	-0.16 ***	-0.09 *	-0.11 **	-0.05
Dummy for 2011 Q3	0.00	-0.03	-0.02	-0.04
Dummy for 2011 Q4	0.09	0.09	0.05	0.04
Quarterly Swiss Real GDP Growth (-1)	-8.37	-3.33	-0.78	5.17
Quarterly US Real GDP Growth (-1)	2.11	2.51	-3.18	-5.21
Quarterly Eurozone Real GDP Growth (-1)	-6.69	-1.73	-3.18	0.82
Growth in local currency assets	0.36 *	0.31	0.31 *	0.22
Quarterly Domestic Real GDP Growth (-1)	1.43 *	1.57 *	0.81	1.08
VIX	0.01 ***	0.005 ***	0.005 ***	0.003 **
Dummy for the post "ALL IT TAKES" period	0.09 *	0.05	0.07 *	0.03
Dummy Postfinance (-1)	0.06		0.04	
Number of observations	219	219	219	219
Number of cross sections	9	9	9	9
R-Squared	32	34	37	41

Table 2b

Table 2B. Swiss franc inflows into liabilities in foreign banks

Explanatory Variable	Total Liabilities		Foreign interbank borrowing		Deposits from resident non-bank	
	Quantity Reg	Price Reg	Quantity Reg	Price Reg	Quantity Reg	Price Reg
constant	-0.02	-0.04	-3.28 *	-2.74 *	0.09	0.09
d(Swiss M0 in %GDP) (-1)	-0.23		2.28		0.48	
Swiss Franc Money Market Spread (-1)		0.44 **		2.3		-0.90 ***
Dummy(Swiss SWAP) * Swiss Swap Volume in %G	-0.59	-0.58	5.72	2.65	2.80 **	2.95 **
d(US M0 in %GDP) (-1)	-3.44 *		-4.84		-0.93	
USD Money Market Spread (-1)		0.05		-0.26		0.15 **
US FX Swap Volume in %GDP	-2.41	1.79	108	106	-10.7	-4.32
d(Eurozone M0 in %GDP) (-1)	-0.11		17.07		0.41	
EUR Money Market Spread (-1)		-0.14		-1.07		0.42 ***
Appreciation of Swiss Franc (-1)	-0.18	-0.24	-2.55	-3.59	-0.86 **	-0.82 **
Appreciation of USD (-1)	-0.20	-0.10	-6.97	-5.61	0.14	-0.12
Appreciation of EUR (-1)	1.01	0.88	7.89	6.44	1.95 **	2.19 ***
Swiss franc daily exchange rate volatility (-1)	30.3	-41	8508	7210	529	527
USD daily exchange rate volatility (-1)	-1041	-726	-6681	-6338	-1947 **	-2259 ***
Dummy Swiss Franc Floor	-0.16	-0.18 **	-0.08	-0.47	-0.13	0.08
Dummy for 2011 Q3	-0.03	0.0	-0.56	-0.17	-0.08	-0.17
Dummy for 2011 Q4	0.18	0.25 **	0.39	1.75	-0.07	-0.36 **
Quarterly Swiss Real GDP Growth (-1)	-20.0 **	-12.8	118	57.3	-28.9 **	-10.77
Quarterly US Real GDP Growth (-1)	10.3	10.0	125	155	15.8 *	9.25
Quarterly Eurozone Real GDP Growth (-1)	-2.17	-3.94	-47.2	-58.3	-1.14	-2.56
Growth in local currency assets	0.28	0.27	0.16	0.20	0.26	0.51
Quarterly Domestic Real GDP Growth (-1)	2.06	1.75	7.16	7.86	2.08	2.28
VIX	0.01 ***	0.007 **	0.09 *	0.08 *	0.01 **	0.00
Dummy for the post "ALL IT TAKES" period	0.09	0.10	1.67	1.50	0.00	-0.21 **
Dummy Postfinance (-1)	0.06		-1.00		0.08	
Number of observations	219	219	219	219	219	219
Number of cross sections	9	9	9	9	9	9
R-Squared	22	25	10	10	21	26

Table 3a

Table 3A. Other foreign currency inflows into asset in foreign banks

Explanatory Variable	Total Assets		Lending to non-bank residents	
	Quantity Reg	Price Reg	Quantity Reg	Price Reg
constant	-0.02	-0.07	-0.09	-0.14 **
Interacted with US currency weight				
d(Swiss M0 in %GDP) (-1)	0.04		-1.07 *	
Swiss Franc Money Market Spread (-1)		-0.86 ***		-0.55 **
Dummy(Swiss SWAP) * Swiss Swap Volume in %GDF	0.34	-1.76	-1.50	-1.83
d(US M0 in %GDP) (-1)	6.36 ***		1.39	
USD Money Market Spread (-1)		0.03		0.07
US FX Swap Volume in %GDP	0.38	21.0 **	25.2 *	30.2 **
d(Eurozone M0 in %GDP) (-1)	7.23 ***		6.41 **	
EUR Money Market Spread (-1)		0.42 ***		0.28 *
Appreciation of Swiss Franc (-1)	0.96	1.42 *	0.52	-0.21
Appreciation of USD (-1)	-0.29	-0.24	-0.62	-1.12 **
Appreciation of EUR (-1)	-2.78	-1.41	-1.26	-0.98
Swiss franc daily exchange rate volatility (-1)	-654	-1341	154	-1817
USD daily exchange rate volatility (-1)	2264	2577 *	1423	3316 *
Dummy Swiss Franc Floor	-0.30 ***	0.02	-0.18	0.12
Dummy for 2011 Q3	0.52 **	0.42 *	0.37	0.32
Dummy for 2011 Q4	0.40 **	0.08	0.60 ***	0.22
Quarterly Swiss Real GDP Growth (-1)	22.8 **	20.6	50.1 ***	47.7 ***
Quarterly US Real GDP Growth (-1)	17.1 **	14.9 *	23.5 ***	20.0 **
Quarterly Eurozone Real GDP Growth (-1)	-29.4 ***	-2.88	-33.7 ***	-16.5 *
Growth in local currency assets	-0.77	0.24	-1.92 ***	-1.52 **
Quarterly Domestic Real GDP Growth (-1)	0.09	-0.13	-0.38	0.55
VIX	0.00	0.00	0.00	0.00
Dummy for the post "ALL IT TAKES" period	0.25 ***	0.00	0.11	-0.18 *
Dummy Postfinance (-1)	-0.11		-0.04	

Table 3A, continued. Other foreign currency inflows into asset in foreign banks

Explanatory Variable	Total Assets		Lending to non-bank residents	
	Quantity Reg	Price Reg	Quantity Reg	Price Reg
Interacted with EUR currency weights				
d(Swiss M0 in %GDP) (-1)	-0.18		-0.03	
Swiss Franc Money Market Spread (-1)		-0.05		-0.05
Dummy(Swiss SWAP) * Swiss Swap Volume in %GDF	-2.30	-1.89	-1.64	-1.49
d(US M0 in %GDP) (-1)	-0.77		0.13	
USD Money Market Spread (-1)		0.05		0.06
US FX Swap Volume in %GDP	0.33	5.09	-0.06	5.94
d(Eurozone M0 in %GDP) (-1)	0.70		0.83	
EUR Money Market Spread (-1)		0.06		0.04
Appreciation of Swiss Franc (-1)	-0.35	-0.28	0.03	0.17
Appreciation of USD (-1)	-0.21	-0.30	-0.17	-0.18
Appreciation of EUR (-1)	1.38 **	1.32 *	0.82	0.81
Swiss franc daily exchange rate volatility (-1)	30.4	120	-72.4	272
USD daily exchange rate volatility (-1)	-404	-364	-106	-416
Dummy Swiss Franc Floor	-0.07	0.01	-0.06	0.02
Dummy for 2011 Q3	0.03	-0.03	0.04	-0.05
Dummy for 2011 Q4	0.10	0.01	0.09	0.01
Quarterly Swiss Real GDP Growth (-1)	-6.12	2.68	-0.49	6.19
Quarterly US Real GDP Growth (-1)	1.87	-0.08	-1.01	-2.73
Quarterly Eurozone Real GDP Growth (-1)	-0.28	0.90	-1.47	0.70
Growth in local currency assets	0.12	-0.08	0.10	-0.03
Quarterly Domestic Real GDP Growth (-1)	0.72	0.92	0.92	1.31
VIX	0.00	0.00	0.00	0.00
Dummy for the post "ALL IT TAKES" period	0.05	-0.01	0.03	-0.02
Dummy Postfinance (-1)	0.02		0.02	
Number of observations	219	219	219	219
Number of cross sections	9	9	9	9
R-Squared	41	36	46	46

Table 3b

Table 3B. Other foreign currency inflows into liabilities in foreign banks

Explanatory Variable	Total Liabilities		Foreign interbank borrowing		Deposits from resident non-bank	
	Quantity Reg	Price Reg	Quantity Reg	Price Reg	Quantity Reg	Price Reg
constant	0.03	-0.05	0.63 **	0.30	0.05	-0.03
Interacted with						
US currency						
d(Swiss M0 in %GDP) (-1)	0.78 *		1.27		0.47	
Swiss Franc Money Market Spread (-1)		-0.66 **		-0.74		-1.14 ***
Dummy(Swiss SWAP) * Swiss Swap Volume in %GDP	-1.80	-3.25 *	-4.55	-5.85	-0.16	-1.63
d(US M0 in %GDP) (-1)	8.38 ***		18.2 *		11.7 ***	
USD Money Market Spread (-1)		-0.04		-0.03		0.02
US FX Swap Volume in %GDP	-2.57	23.3 **	-42.7	-15.9	-16.4	17.2
d(Eurozone M0 in %GDP) (-1)	1.66		4.63		4.10	
EUR Money Market Spread (-1)		0.40 **		-0.09		0.63 ***
Appreciation of Swiss Franc (-1)	-1.06	0.63	-5.27	-3.89	0.93	2.94 ***
Appreciation of USD (-1)	-0.92 *	-0.47	-3.09	-2.45	-0.75	-0.51
Appreciation of EUR (-1)	-14.0	-21.3	-55.6	-82.8	10.2	6.0
Swiss franc daily exchange rate volatility (-1)	-5759 **	-3875 **	-6080	204	-5920 ***	-4028 **
USD daily exchange rate volatility (-1)	7007 **	5532 **	-5273	-12740	9380 ***	8417 ***
Dummy Swiss Franc Floor	-0.40 ***	-0.14	-0.85	-0.54	-0.44 ***	0.07
Dummy for 2011 Q3	1.15 ***	0.87 **	0.98	-0.01	1.25 ***	0.79 **
Dummy for 2011 Q4	0.60 ***	0.30	0.71	0.46	0.63 ***	0.00
Quarterly Swiss Real GDP Growth (-1)	-11.0	0.05	-40.6	-44.6	12.9	32.6 *
Quarterly US Real GDP Growth (-1)	33.6 ***	32.1 ***	34.1	27.8	20.8 **	12.0
Quarterly Eurozone Real GDP Growth (-1)	-20.8 *	-0.63	-78.5	-48.8	-37.0 ***	-5.04
Growth in local currency assets	0.39	1.11	-0.17	-0.07	-1.07 **	-0.66
Quarterly Domestic Real GDP Growth (-1)	-0.11	-0.75	-1.41	1.26	0.41	1.47
VIX	-0.02 **	-0.01 *	0.00	0.02	-0.02 ***	-0.02 ***
Dummy for the post *ALL IT TAKES* period	0.12	0.06	-0.17	-0.03	0.03	-0.20 **
Dummy Postfinance (-1)	-0.04		0.42		-0.02	

Table 3b

Table 3B, continued. Other foreign currency inflows into liabilities in foreign banks

Interacted with EUR currency weights	Explanatory Variable	Total Liabilities		Foreign interbank borrowing		Deposits from resident non-bank	
		Quantity Reg	Price Reg	Quantity Reg	Price Reg	Quantity Reg	Price Reg
	d(Swiss M0 in %GDP) (-1)	-0.30 *		-2.31 ***		-0.06	
	Swiss Franc Money Market Spread (-1)		0.05		0.56		0.08
	Dummy(Swiss SWAP) * Swiss Swap Volume in %GDP	-1.12	-1.11	-3.29	-2.90	-1.13	-1.21
	d(US M0 in %GDP) (-1)	-0.83		-6.00		-0.58	
	USD Money Market Spread (-1)		0.07 *		0.11		0.03
	US FX Swap Volume in %GDP	1.26	6.23	-35.6 *	-15.4	3.49	5.48
	d(Eurozone M0 in %GDP) (-1)	1.58		5.15		0.66	
	EUR Money Market Spread (-1)		-0.01		0.07		-0.03
	Appreciation of Swiss Franc (-1)	0.17	0.05	0.78	0.89	0.12	-0.03
	Appreciation of USD (-1)	-0.19	-0.23	1.21	1.15	-0.05	-0.06
	Appreciation of EUR (-1)	1.68	2.37	2.85	5.49	0.03	0.38
	Swiss franc daily exchange rate volatility (-1)	346	182	-1072	-1983	149	13.8
	USD daily exchange rate volatility (-1)	-414	-190	836	2379	-402	-287
	Dummy Swiss Franc Floor	-0.04	0.03	-0.36	-0.03	-0.02	0.00
	Dummy for 2011 Q3	-0.01	-0.05	0.07	-0.08	-0.01	0.00
	Dummy for 2011 Q4	0.09	0.01	0.62	0.17	0.02	0.02
	Quarterly Swiss Real GDP Growth (-1)	3.43	7.99	-36.9	-5.05	3.61	4.30
	Quarterly US Real GDP Growth (-1)	-2.22	-3.95	-33.8	-38.7 *	-1.03	-0.71
	Quarterly Eurozone Real GDP Growth (-1)	-2.05	1.60	-12.7	1.21	-1.28	-0.61
	Growth in local currency assets	-0.02	-0.10	-0.11	-0.10	0.14	0.13
	Quarterly Domestic Real GDP Growth (-1)	0.51	0.87	2.71	1.64	0.42	0.53
	VIX	0.00	0.00	0.00	0.00	0.00	0.00
	Dummy for the post *ALL IT TAKES* period	0.06	-0.01	0.22	-0.03	0.03	0.02
	Dummy Postfinance (-1)	0.02		0.07		0.03	
	Number of observations	219	219	219	219	219	219
	Number of cross sections	9	9	9	9	9	9
	R-Squared	34	31	30	27	41	37