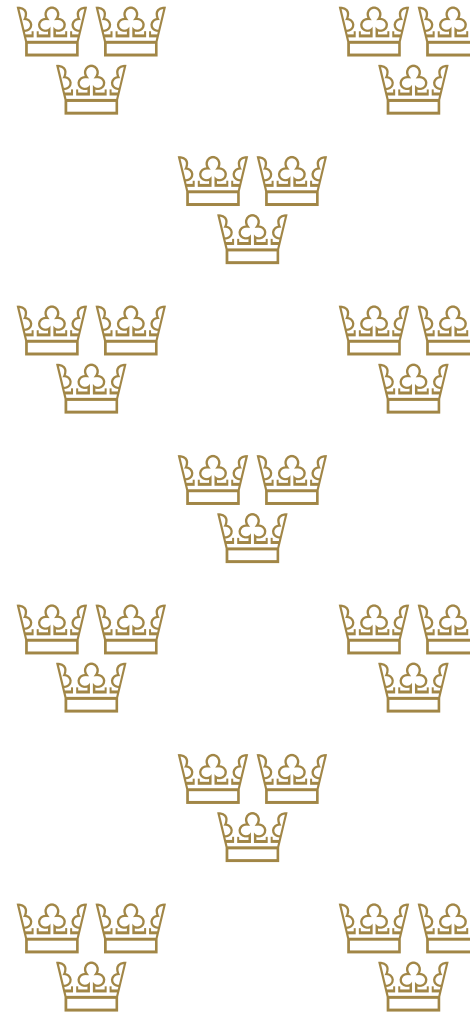


Government Bond Market Developments and the Usage of the DMO's Security Lending Facility - Evidence from Sweden

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Motivation

What can security lending facility (SLF) volumes tell us about government bond market developments?

- Usage of SLF under different market conditions
- Factors that drive the usage of the facility
- Market functioning and liquidity



Novelty of this analysis

- Using data on SLF to study changes in the government bond market functioning
- Granular data: Daily observations in several dimensions
- Longest data set: 2002-2021



Purpose of the SLF

- As part of its financing strategy, the Swedish DMO operates a security lending facility
- The primary aim of the SLF is to contribute to the liquidity of the Swedish government debt and support the smooth functioning of short-term funding markets
- The *repo facility* allows primary dealers to obtain bonds outside the regular securities auctions in the primary markets
- The facility is intended to be a **last resort mechanism**
- The DMO acts as a “securities lender of last resort”



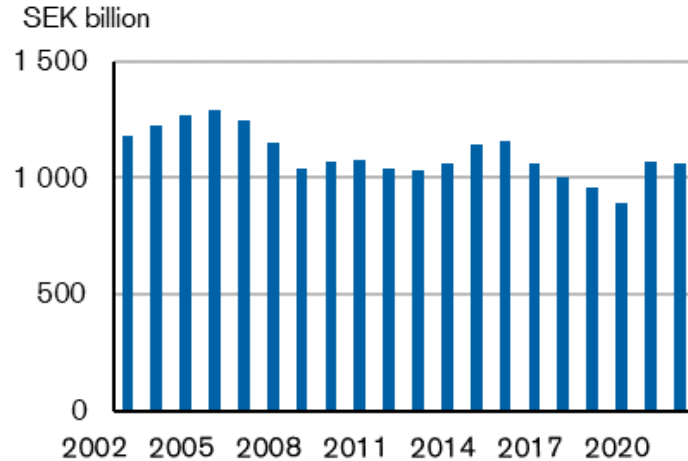
Three types of SLF

- **O/N - Overnight**
 - One day loans of government securities against cash from today until tomorrow
 - Prevents delivery failures
- **T/N - Tomorrow next**
 - One day loans of government securities against cash from tomorrow until the day after
 - Supports primary dealers to fulfill their market making commitments and deliveries
- **Swap**
 - One week loans of government securities against government securities from tomorrow
 - Supports primary dealers to fulfill their market making commitments and deliveries



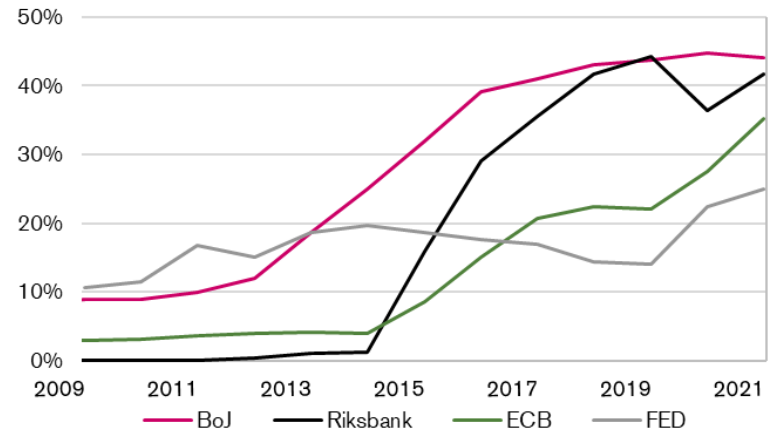
Long-term trends and significant changes...

Declining central government debt



Note: Central government debt including on-lending and assets under management.

Central bank purchases of government bonds

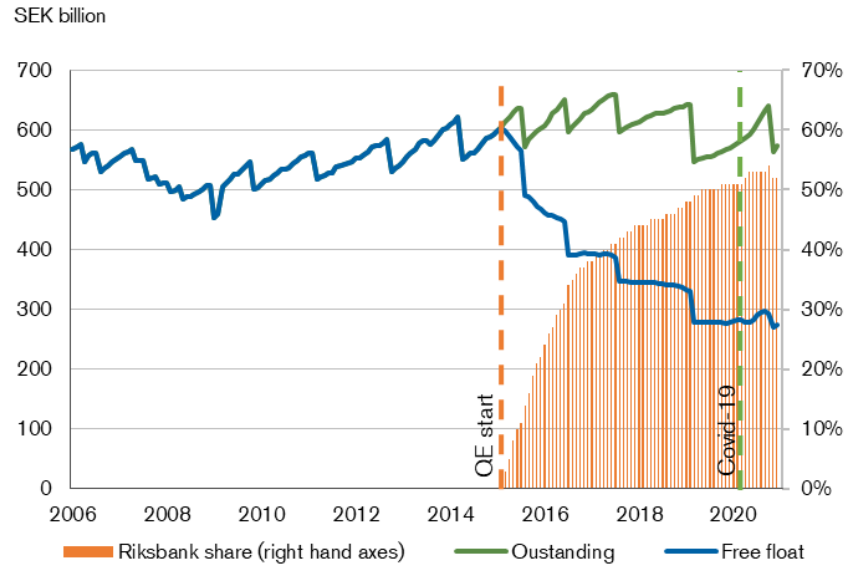


Note: Central bank holdings as a share of domestic government securities eligible for asset purchase program



... have led to lower availability of bonds...

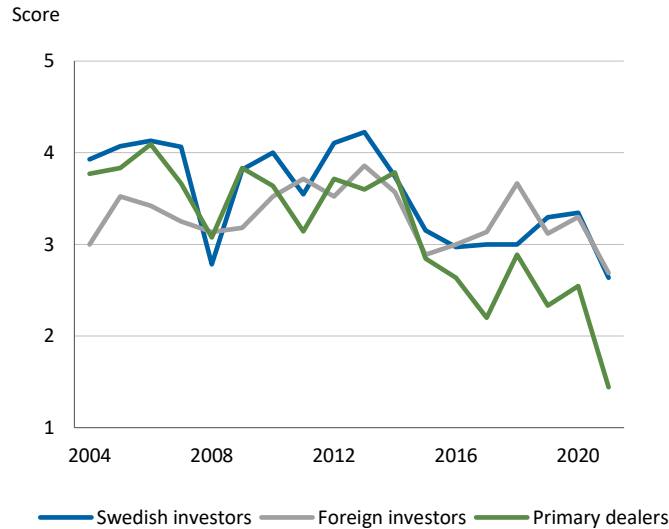
Available nominal government bonds at the market



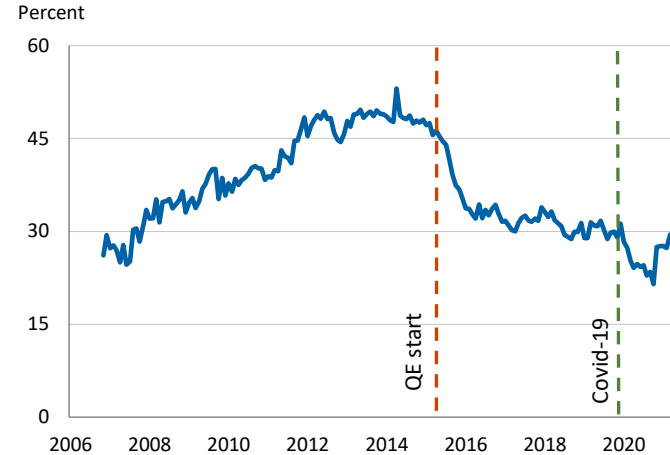


... and to changes in market functioning and investor behavior

Perceived liquidity of government bonds



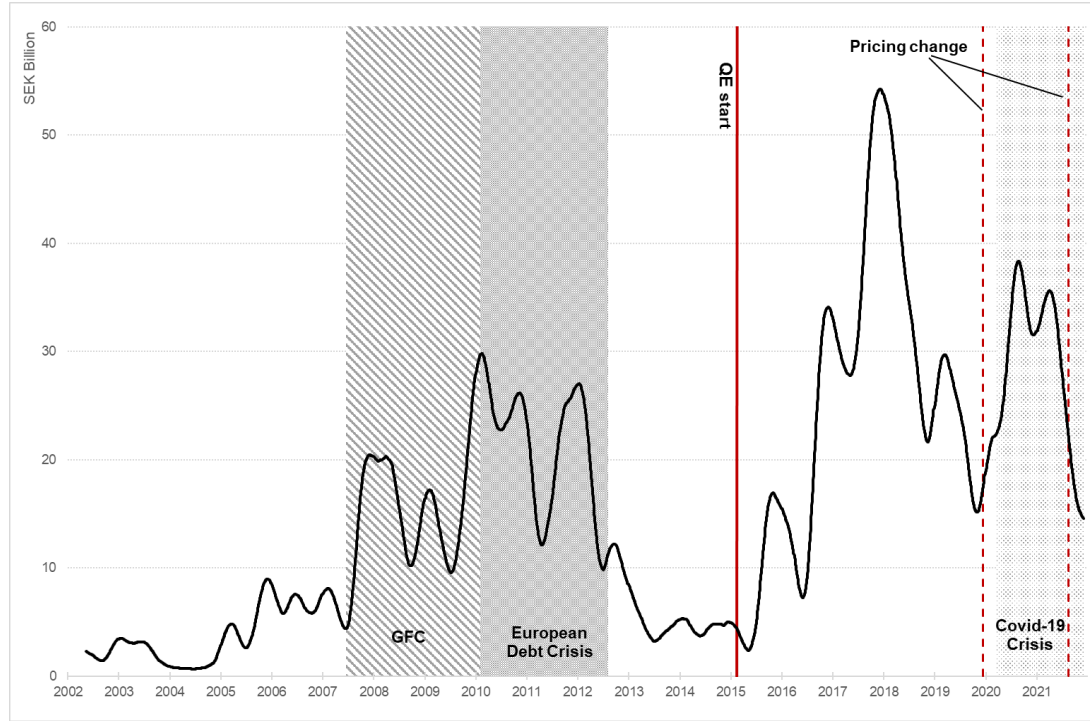
Foreign ownership of government bonds



Note: Score relates to ranking of liquidity in an annual investors' survey. A higher score stands for higher liquidity

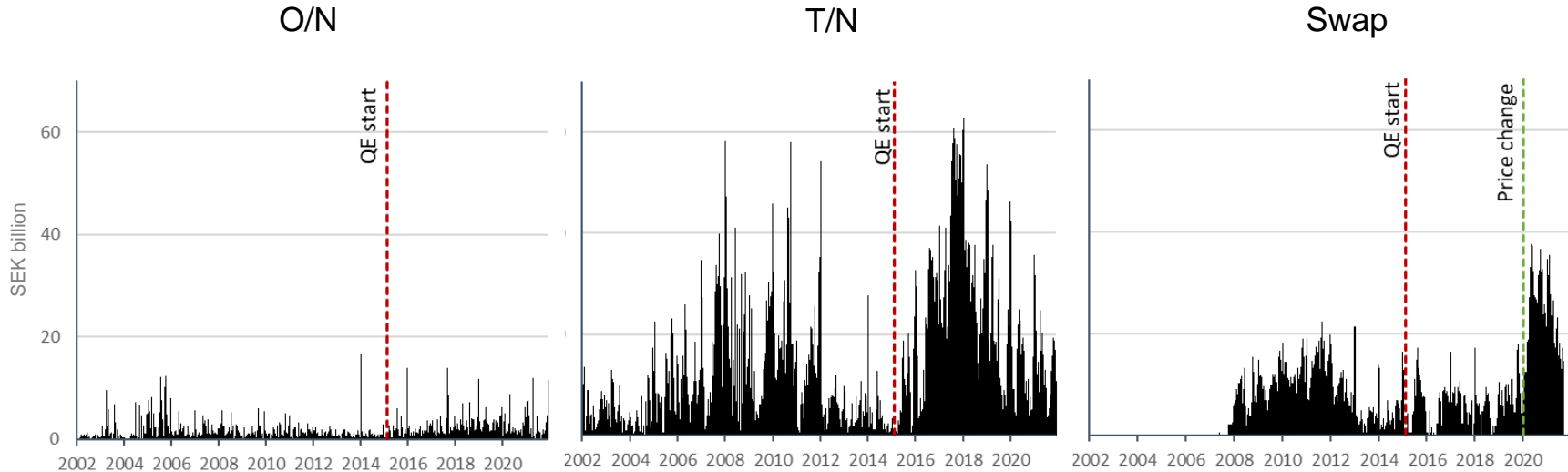


Usage of the SLF mirrors the history of crises and changes affecting the market





Different types of SLF are used differently



Prevents delivery failures

Supports primary dealers to fulfill market making commitments and deliveries



Formal analysis

$$SLF_{i,t} = \alpha_i + \beta_1 Holdings_{i,t-1} + \beta_2 Purchases_{i,t} + \beta_3 Issuance_{i,t-1} + \beta_4 Vol_t + \beta_5 RSdummy_t + \epsilon_{i,t}$$

Price change
in repo swap
facility

- Panel regression with bond and time fixed effects
- QE period i.e. 2015-2021
- Nominal bonds included in QE programme (14 bonds)
- Monthly aggregates

Panel regression I



	(1)	(2)	(3)	(4)
Holdings	0.22*** (0.07)	0.22*** (0.08)	0.22*** (0.08)	0.08** (0.04)
Purchases	10.69*** (4.09)	11.90*** (3.67)	11.88*** (3.68)	10.38** (4.14)
Issuance		-1.84*** (0.66)	-1.85*** (0.66)	-1.63** (0.64)
IIMA Index			0.94 (1.87)	-0.02*** (0.01)
RS dummy				-0.01 (0.01)
Bond FE	Yes	Yes	Yes	Yes
Time FE	Yes	Yes	Yes	No
N. obs	699	699	699	699
R-Sq.	0.13	0.14	0.14	0.08

QE significantly increases SLF volumes

Issuance decreases SLF volumes

Market volatility/stress lowers SLF volumes indicating flight to liquidity

Pricing change did not have significant effect on SLF volumes

Note: Total SLF volumes are the dependent variable for each regression in Table 1. Standard errors in parentheses. * $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$.

Panel regression II



	Total (1)	T/N (2)	O/N (3)	Swap (4)
Holding	0.08** (0.04)	0.04* (0.02)	0.004* (0.002)	0.02 (0.02)
Purchases	10.38** (4.14)	6.06* (3.30)	0.68* (0.41)	4.10** (1.87)
Issuance	-1.63** (0.64)	-1.04* (0.55)	0.05 (0.07)	0.24 (0.62)
IIMA index	-0.02*** (0.01)	-0.03*** (0.01)	-0.00 (0.00)	0.01 (0.01)
RS dummy	-0.01 (0.01)	-0.03*** (0.01)	-0.002*** (0.001)	0.02** (0.01)
Bond FE	Yes	Yes	Yes	Yes
Time FE	No	No	No	No
N. obs	699	674	656	382
R-Sq.	0.08	0.13	0.03	0.14

Note: Volumes by total and type of SLF are the dependent variable for each regression in Table 2. Standard errors in parenthesis. * p<0.1; **p<0.05; ***p<0.01.

QE program increases SLF volumes in all SLF types

Increased issuance lowers the usage of SLF

Higher volatility/ stress in the market lowers the SLF volumes

Price change in repo swap facility did not affect total SLF volumes...

... it caused a substitution effect



Conclusions

- Usage of the SLF increases during crisis periods
- QE policies have had a persistent influence on the usage of the facility and primary dealers' demand, while the pandemic crisis effect was short-lived
- Our results show that flight to quality and flight to liquidity can be opposing forces in the government bond market
- The terms and conditions attached to a DMO's SLF are a powerful policy tool and changes can bring significant shifts in the usage of the SLF