Welcome to the 12th Payment and Settlement System Simulation Seminar and Workshop



## BoF-PSS2 Situation today

28 Aug 2014 Tatu Laine & Kasperi Korpinen Simulator Team



Bank of Finland PAYMENT AND SETTLEMENT SYSTEM SIMULATOR



### **BoF-PSS2 Distribution (August 2014)**

### **BoF-PSS2 Simulator**

- · BoF-PSS2 simulator has a history of more than 10 years
- 99 granted licenses in August 2014
  - 56% in central banks, 23% in academic institutions, the rest in ACH's, CSD's, ECB, BIS...
- · User network has been wide, but dispersed
- Idea to create a contact point:
  - BoF-PSS2 Simulator User group in LinkedIn

All the BoF-PSS2 Simulator Users are invited to join this group!



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### Services for BoF-PSS2 users

- Training courses
  - General Training course
  - TARGET2 Simulator course
  - Tailored on site trainings
- User Support
  - Help desk service
  - Extranet workspace for larger projects (confidential area)
  - Consultation and advisory services
- Feature Development
  - Project estimation
  - Change implementation



### Team behind the services

- · Development of the simulator, support and analysis work
- Strong working experience on quantitative tools for analysis of payment and settlement systems
- Academic experience in economics, computational analysis, computer science and physics









Tatu

Kasperi

Harri

Maarit



Ongoing co-operation with original developers of BoF-PSS2

### **BOF-PSS2**, What For?

- Research
- Liquidity risk identification and quantification
- Complying with CPSS-IOSCO principles and BCBS Monitoring indicators for intraday liquidity management
- System development



### Simulation based liquidity risk monitoring

Simulated Risk Scenarios

- Liquidity risks observed at participant level

- Identification of the source of the risk and the systemic importance of participants Is the liquidity pressure bearable by the participant ?



Macro Prudential & FSA Analysis

-Capability of participant to overcome the identified pressures.

- Sufficiency of liquidity buffers

Basel III: International framework for liquidity risk measurement, standards and monitoring Monitoring indicators for intraday liquidity management



### **Global cooperation**



- Sponsorships from BOE, BOC, FED
- Development of TARGET2 Simulator jointly provided by Deutsche Bundesbank, Banque de France, Banca d'Italia, and Bank of Finland for overseers and operators.
- Participation to ESCB working groups
- EURO1 simulator. Joint project with EBA Clearing 2011



# New features of version 4.1.0 (available since June 2014)

**Faster simulations** 

New concept: Business day. A business day can take place on several calendar days. The day may end on different day than it started.

Possibility to define start of day and end of day for each business day separately.

Enhanced cross-check functionality



### Future development

- Parallel processing, benefits already visible with a 4CPU desktop computer
- Automatisation of scenarios



### Availability

Software available for research or operative monitoring for governmental bodies free of charge – Visit: www.bof.fi/sc/bof-pss



### Overall agenda of the 12th simulator seminar

Day 1	Day 2
Simulator team overview	Presentations 6 - 9
Presentations 1 – 3	BoF-PSS2 simul. example
Lunch	Lunch
Presentations 4 – 5	Presentations 10 - 11
Evening at BoF Villa	Farewell coctails

• Everyone is invited to the dinner this evening at the Bank of Finland's Villa



- Payment system features, liquidity studies, network studies, new indicators, performance improvem.
- 11 interesting presentations
- 5 with simulator



### **Seminar participants**

- Areas of interest match the seminar themes
- Diversified global participation:
  - 25 nationalities
  - 5 continents

Торіс	Number of votes (max 46)
Indicators based on Payment	
system data	35
Stress testing	31
Contagion, cross-system analysis,	
networks	29
Liquidity saving mechanism	25
Agent Based modelling	16
System design	13

- 43 from CB's, 2 from private side and 1 with research affiliation.
- Users of the BoF-PSS2 simulator
  - 50% are already familiar



### Welcome!