THE LOOMING DIGITAL REVOLUTION IN FINANCIAL REGULATION

Recent financial crises laid bare serious shortcomings in financial regulation. In retrospect, the lack of timely granular data reported in a data standard capable of supporting current and forward-looking financial analysis contributed much to the crises. The ACTUS project aims to remedy this weakness by creating a global standard for the consistent representation of financial contracts that enables analysis needed for both micro-prudential and macroprudential regulation. This standard supports the ongoing collection and timely analysis of granular transaction and position not previously possible, giving regulators a powerful new way to understand the conditions of and risks posed to financial institutions and the financial system.

EFFECTIVE REGULATION REQUIRES AN EARLY WARNING SYSTEM TO SPOT RISKS TO INDIVIDUAL FINANCIAL INSTITUTIONS AND THE FINANCIAL SYSTEM

Nevertheless, much of the data financial regulators collect does not support such capabilities:

- The data is backwards looking and risks are in the future
- The data is static and risks are dynamic and fast moving
- The data is available only with a lag and can be analyzed only after the fact
- The data is highly aggregated and important information is lost
- The data often include summary statistics that have limited value
- The data does not provide information on the interconnectedness of financial firms

As a consequence:

- Regulatory reports do not enable forward-looking analysis or support an early warning system to identify risks to individual firms or developing systemic crises

KEY INSIGHTS TO THAT CAN ENABLE DATA COLLECTION FOR MORE EFFECTIVE REGULATION

- In the financial world analysis starts with the promised payment obligations (i.e., the promised cash flow) of individual financial contracts. These payment obligations are of equal importance for transaction processing and all types of financial analytics, including the creation of accounting records, risk management, asset/liability management, assessment of liquidity conditions, forward business planning, and pre-trade analysis.
- The core of any financial contract is its cash flow obligations. These payment obligations are simply numbers and are most accurately represented and computed mathematically. Nevertheless, financial contracts are still written in natural language which then has to be interpreted to create the formulas to compute the cash flow obligations of the contract.
- Despite the thousands of different financial products, there are a limited number of cash flow patterns which can be represented by less than three dozen algorithms that can accurately compute the cash flow obligations of almost all financial contracts and instruments.

THESE INSIGHTS UNDERPIN THE ACTUS ALGORITHMIC FINANCIAL CONTRACT STANDARD

- The ACTUS Financial Contract Standard consists of three components:
  - A set of algorithms, called ACTUS Contract Types (CTs), that embody the logic of the contracts that determine the cash flow obligations to maturity of financial contracts
  - The ACTUS Data Dictionary that defines the initial Contract Terms which together with the algorithms generate the discreet cash flow obligations of almost all financial contracts extant in the financial world
  - A reference implementation of the Contract Types programmed in Java

COLLECTING GRANULAR FINANCIAL CONTRACT DATA IN THE ACTUS STANDARD IS THE KEY TO LESS BURDENSOME AND MORE EFFECTIVE REGULATORY REPORTING

- More effective financial regulation can start with the ongoing collection of granular transaction and position data in ACTUS which is the tested and validated financial contract standard that generates the promised payment obligations (i.e. cash flows).
- Risk factors can then be modeled to assess how they can be expected to adversely affect the promised payments/cash flow.
- These results form the basis of all higher-level forward-looking analysis that is needed by regulators for an early warning system to alert them to which financial firms are getting into trouble
- The same granular data will also enable regulators to see the cash flow obligations between financial firms and, for the first time, be able to see the potential for cascading failures that can lead to a systemic crisis

THIS REVOLUTION IN REGULATORY DATA COLLECTION WILL BE A WIN-WIN FOR EVERYONE

- Regulators will be far better equipped to successfully carry out their responsibilities
- Financial institutions will have a smaller regulatory reporting burden because they will not have to develop special purpose regulatory mandated reports. They will only need to provide the regulator with a digital copy of the same granular transaction and position data used for internal management and operational purposes.
- Financial institutions will have an approach to data management that can solve the current chaotic nature of data within the firms, which typically lack even an internal algorithmic standard. Use of the ACTUS Standard can solve the tremendous reconciliation problems banks face every day and significantly reduce their current high operational expenses
- Financial markets will have greater transparency as all counterparties will have an unambiguous understanding of their cash flow obligations
- Financial literacy training using the ACTUS standard will begin to address the current low level financial literacy

CONTACT: Hon. Dr. Allan I. Mendelowitz, President, ACTUS Financial Research Foundation
Allan.Mendelowitz@ACTUSfrf.org
Dr. Willi Brammertz, President, ACTUS Users Association
willi.brammertz@ariadne.swiss

ACTUS Website: www.ACTUSfrf.org

Read more about ACTUS, Regulation, and Smart Financial Contracts in Articles published by Dr. Brammertz and Dr. Mendelowitz. They are summarized and downloadable at:

http://www.brammertz-consulting.ch/publications-and-events/articles/