GS1 Industry & Standards Event 2019
9-13 September 2019 – Lisbon, Portugal

Transforming business together

GS1 meets Fintech: Standards in financial services
11:00 – 12:30

For all interested in new business opportunities from fintech, standards and financial data

Michal Piechocki | CEO | Business Reportig – Advisory Group
Standards in Financial Services

The dinosaurs, the jungle and the fountain of youth
Data opportunities and challenges ini financial world

- FinTech
- RegTech
- SupTech
- Algorithm
- BigData
- ML and AI
- Payments revolution
- BigTechs
- Markets infrastructure evolution
- Crypto-currencies and digital tokens
- Real-time granular insight across data siloes
- Anti-money laundering oversight
Financial industry standards map

Identification
- ISO 20022
- UPI

Insurance / mortgage
- ISIN
- UTI

Market / trade
- ACORD
- FIBO

Universal / finance
- XBRL GL
- MDDL

Research / statistics
- IBAN
- IBAN

Specialisation
- CCS
- FIX Protocol

Translation / Detailed
- LEI
- LEI

Abstraction
- DPM
- RIML

Reporting / Aggregated
- XBRL
- SDDS

Universal / finance
- ACTUS
- MDX

The Global Language of Business

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Data interview with central banks

- How to improve inflation calculation?
- Can central bank use micro data (individual payments data) for AML analysis?
- How integration of supply chain data should help recognise AML, sanctions, CTF (counter-terrorism financing) issues?
- How shall financial institutions support Sustainable Development Goals i.e. green finance?
- How can we monitor shadow banking?
Data interview with financial institutions

- How to compete with BigTech?
  - Can financial institutions leverage payments as data?
- Are supply chain standardisation experiences relevant for financial areas like AML?
  - Can banks play a role in IoT clearing services?
- How can financial institutions leverage AI / ML?
  - How to operate in Open Finance world?
  - Can insurance firms restore trust by digitasing supply chain in claims payments?
Sample questions for the GS1 Community

Can supply chain participants create/expand their ecosystem to include fintechs, perhaps by-passing banks?

Can integration of EAN/GPC, IBAN and ISO e-invoices lead to better VAT frauds identification?

Shall supply chain participants automate and streamline processes including interactions with financial institutions?
Example: Payments is Data

- In the UK the Bank of England has embarked on the RTGS Renewal Program
- ISO 20022 and LEI are key components for payment messages and counterparty identification and are expected to bring new payment providers
- The core data vehicle is an ISO 20022 Common Credit Schema message that contains fields for LEI and purpose code (unspecified)
- What if?

GS1 community co-worked with financial institutions on standardisation of purpose codes

Participants would expand LEI reference data / counterparties identification

Enhanced messages would allow better collaboration by supply chain and industry participants

Enhanced messages could lead to better analysis and automation of supply chain
You can’t solve exponential problems with linear solutions.

Robin Chase, CEO of Zipcar
Standards in Financial Services

“I don’t think out-of-the-box. I tear it up.”

The European Financial Transparency Gateway case
In 2005 the European Union has introduced unified accounting and reporting standards called the International Financial Reporting Standards (IFRS).
From 2017 the EU will require capital market participants to start using the Legal Entity Identifier (LEI) as a unique company identification mechanism.
From 2020 all EU listed companies will be required to apply a common European Single Electronic Format which adopts the Inline XBRL standard for digital representation of financial reports.
Yet still, for an investor, the European capital market information is not conveniently accessible.
In 2017 the European Commission has started researching the possibility to use Blockchain technology to create a distributed record of financial reports across the EU.

European Financial Transparency Gateway
powered by
Distributed Ledger Technology
Currently in each country there is an official registry called the Officially Appointed Mechanism (OAM) that is responsible for the distribution of regulated information received from listed companies.
At present these registries are not connected in any usable manner.
But what if these registries were connected through a decentralized network?
What if they became a “cloud-based” commonly accessible registry that synchronises national regulatory information automatically?
This is what we call the European Financial Transparency Gateway
Report Metadata

- Issuer Name
- Unique Issuer ID (LEI)
- Type of regulated information
- Report URL (OAM)
- Report URL (Issuer’s IR website)
- Issuer’s Home Member State etc.
Report Metadata

- Issuer Name
- Unique Issuer ID
- Type of regulated information
- Report URL (OAM)
- Report URL (Issuer)
- Issuer's Home Member State

Etc.
Accessing information

European Financial Transparency Gateway
powered by
Distributed Ledger Technology
I would like to invest in European companies that have at least 30% ROI
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I am looking for a steel producer in east Europe with a low debt ratio to merge with a shipbuilding company.
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I am looking for peers with more than 50 million EUR assets and revenue more than 70 million EUR and profit more than 5 million EUR.
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Token

The term ‘token’ here is synonym for ‘meta data’.
## Way ahead

<table>
<thead>
<tr>
<th>Company establishment</th>
<th>Growth and development stage</th>
<th>Company transformation, limitation or discontinuity</th>
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</thead>
<tbody>
<tr>
<td><strong>Common actions (reporting, registration, announcements, notifications etc.)</strong></td>
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<tr>
<td>Registration of a company</td>
<td>Initial Public Offering</td>
<td>Splits / mergers / acquisitions</td>
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<td>Initial Coin/Token Offering</td>
<td>Prospectuses and KIIDs publication</td>
<td>Nationalisation</td>
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<tr>
<td>Application for public grants / funding</td>
<td>Issuance of debt securities</td>
<td>Filing for bankruptcy / insolvency</td>
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<tr>
<td>Exemptions and privileges</td>
<td>Corporate actions publication</td>
<td>Deregistration</td>
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<tr>
<td>Tax reporting and registers</td>
<td>Registration of related parties and subsidiaries</td>
<td>Going dormant</td>
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<tr>
<td></td>
<td>Licences and permissions</td>
<td>Sanctions</td>
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<tr>
<td></td>
<td>Application for public grants / funding</td>
<td>Prosecutions and regulatory warnings</td>
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<tr>
<td></td>
<td>Tax reporting and registers</td>
<td></td>
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<tr>
<td><strong>Other actions and market-driven activities</strong></td>
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<tr>
<td>Investment and business plans publication</td>
<td>Ratings publication</td>
<td>Announcements of recovery plans</td>
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<tr>
<td>Forecasts, prospects and plans announcements</td>
<td>Rankings and indices</td>
<td>Bankruptcy auctions</td>
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<td></td>
<td>Certificates</td>
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<td></td>
<td>Corporate sustainability reporting</td>
<td></td>
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<tr>
<td></td>
<td>Major internal corporate announcements</td>
<td></td>
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<tr>
<td></td>
<td>International cooperation and trade events</td>
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</table>
GS1 meets Fintech

“There are hundreds of startups with a lot of brains and money working on various alternatives to traditional banking”

Jamie Dimon, CEO JPMorgan Chase

“If banks cannot truly be customer intimate, they are doomed to be just dumb commodities, acting behind the scenes, like utilities”

JP Nicols, Co-founder of the Bank Innovators Council
Imagine...

• An app that allows a Customer to download an e-receipt to their phone

• The products are identified using GS1 EAN, barcodes are used for recognition and e-receipts are connected using Digital Link

• Shop location, time of purchase, detailed list of products, ingredients with allergens, prices are all known to you as the app operator.

• Now imagine opportunities stemming from all that data.

• Ladies and Gentlemen let me introduce Billy...
The journey

Initial idea: to help people with allergies identify products without allergens.

Customers were looking for a shopping-list-type app.

EAN and barcodes used for product identifiers.

These were combined with product ingredients database.

Shop location, date and time as well as detailed e-receipt were recorded in a database.

Combined data set allow to give Customer advice on cheaper, healthier and available products.
Standards mix

- GS1 Standards for **Billy – Shopping Assistant**
  - Global Trade Item Number (GTIN)
  - Global Coupon Number (GCN)
  - Barcodes (EAN/UPC)
  - Product Data Sharing standards
    - GS1 Digital Link
    - Global Product Classification (GPC)
    - Global Data Synchronisation Network (GDSN)
The idea

Product Information
Name, Description, MSRP, etc.

Manufacturer 1
Manufacturer 2
Manufacturer 3

STANDARDS AND GOVERNING BODIES
GS1
Financial Institutions
EU / EC

e-receipt schema basing on GS1 standards

Transaction Information
EAN, products, location, prices, date, etc.

RETAILERS

CUSTOMERS

EXTERNAL SOURCES
Product Databases
Health Services
Third-party solutions

The Global Language of Business
Value for financial industry

• Financial Institutions (Banking Sector)
  - Providing precise information about transaction data for e.g. for the banking sector
  - Gives insight for bank customer needs and preferences
• Financial Institutions (Government Sector)
  - Could be used for preventing tax evasion by making transactions more traceable and verifiable
Value for market participants

- Market Research Agencies
  - Analyse pricing trends by gathering consumer data
  - Those trends can be used for determining the inflation rate and purchasing power for a particular currency
  - This data can be precise and granular, giving more detailed and reliable information straight from the market
Value for goods producers

• Goods Providers
  - Customer buying habits (what, where, when, with)
  - Reliable, trusted, accurate and quality data
  - Precise and up-to-date information
  - Pricing across regions
  - Related/linked purchases
Innovative areas

• Internet of Things
  - Integrate with devices like smart fridges
  - Analyse consumer habits to determine what should be ordered helping manage wasting food
  - Use distributed ledger technologies like blockchain for clearing and settlement
Related industries

• Health oriented services
  - Provide the customer with additional health information about products
    • Ingredients
    • Nutritional information
    • etc.
  - Suggest other choices based on dietary or medical needs
  - Share customer eating habits with fitness or diet experts
A 360° view of the ecosystem

Billy
Shopping Assistant

- Shopping chains
- Market research agencies
- Goods providers
- Financial institutions
- Press and media
- Marketing agencies
- Internet of Things
- Certification authorities
- Health oriented services
- Grocery delivery services
- e-receipts providers
An example from Poland
LEI and Digital Verifiable Credentials

„You think that’s air you’re breathing now?“

Morpheus, The Matrix
Digital Verifiable Credentials

Rocket Industries identified by LEI issues a Digital Verifiable Credential confirming that Alice is their CEO.

Alice is identified on the Sovrin network. The verified DVC is available on a 24/7 blockchain and linked to a verifiable LEI identifying the Rocket Industries.

Bob can automatically verify not only Alice’s digital identity but also her credential to act as CEO. Credentials can be custom-level detailed.
There is more than meets the eye

- Easy to implement and uses distributed ledger solution
- Self-Sovereign Identity
- Role of LOUs in verifying credentials
- Levels of credentials
- Additional attributes (credentials with transaction caps)
### InlineXBRL and LEI

#### GLEIF Annual Report 2018

<table>
<thead>
<tr>
<th>Subsidies and donations</th>
<th>3,6</th>
<th>40,495</th>
<th>61,454</th>
</tr>
</thead>
<tbody>
<tr>
<td>Financial income/expense</td>
<td>3,6</td>
<td>12,470</td>
<td>&lt;300</td>
</tr>
<tr>
<td><strong>Net surplus</strong></td>
<td></td>
<td>8,349,395</td>
<td>252,867</td>
</tr>
<tr>
<td>Changes of components of net equity</td>
<td>3,2</td>
<td>3,312</td>
<td>44,426</td>
</tr>
<tr>
<td>Items that will not be reclassified to net surplus</td>
<td>3,312</td>
<td>44,426</td>
<td></td>
</tr>
<tr>
<td><strong>Other comprehensive income</strong></td>
<td>3,312</td>
<td>44,426</td>
<td></td>
</tr>
<tr>
<td><strong>Total comprehensive income</strong></td>
<td>8,352,707</td>
<td>297,293</td>
<td></td>
</tr>
</tbody>
</table>

*The total of income less expenses, excluding the components of other comprehensive income. [Refer: Other comprehensive income]*

**Dimensions**
- **Date**: 31 Dec 2018
- **Fact Value**: US $ 8,349,395
- **Accuracy**: 0 (ones)
- **Change**: 3,201.9% increase on 31 Dec 2017
- **Entity**: [LEI] 506700G129325Q...
- **Concept**: (ifrs) Profit (loss)

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So where is money in connecting GS1 and Fintech?
It is definitely not in a one-off data mashing exercise or dumping all data into a data lake and go-figure approach.
It is in creating a dynamic, self-sustainable ecosystem of increasingly more valuable data, continuously fuelling your business machine
Thank you
Michal Piechocki
Business Reporting – Advisory Group | CEO

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