THE PROSPECT TOWARD XBRL IMPLEMENTATION IN THE NATIONAL BANK OF CAMBODIA
Cambodia Plans XBRL Implementation

Recently, there has been a research conducted by an official of the National Bank of Cambodia on a comprehensive plan for reform of its off site surveillance and monetary policy data collection functions that will see that central bank shift to utilise XBRL for data collection from banks and other deposit taking institutions over the next three and a half years.

In a presentation at the Eurofiling week in Frankfurt recently, NBC’s official Virak Khem from the NBC described the challenges which that institution faces, including an environment in which significantly more time is spent compiling data than in analysing it, and where validation errors can impair that analysis unless corrected. The research has simplified the journey that industry and the regulator will need to take by introducing a national standard chart of accounts for financial institutions, which should simplify taxonomy development, simplify the preparation of reports by reporting institutions, and enhance analysis over time.

A number of important points were made in the presentation, including the problems that emerging economies such as Cambodia face in resourcing a project of this nature, and the strain that project teams face, given the relative complexity of managing and maintaining taxonomies. Notwithstanding the challenges, the research is of the view that the benefits are sufficiently significant as to green light the initiative.

The Central Bank has worked closely with both Bank Indonesia, and the SNAI, the Shanghai National Accounting Institute which maintains an XBRL training program for industry in China.

From XBRL International’s perspective, this very useful study underpins the need to continue to work on simplification of the standard, it demonstrates the need to work towards better mechanisms for sharing and reusing taxonomy elements, and demonstrates the urgent need to accelerate the preparation of high quality guidance material. Although the consortium is working hard in many areas, the organisation relies on its membership for the necessary combination of financial and volunteer resources to meet the demands of XBRL’s users. We strongly encourage regulators and government agencies to join XBRL International to assist with these kinds of efforts.

Read the presentation
AUTHOR

1. Virak Khem, National Bank of Cambodia
2. Meiling Liu, Shanghai National Accounting Institute
3. Yuanqing Mao, Harbin University of Commerce
4. Yudi Muliawirawan Sugalih, Bank Indonesia
CONTENT

- Introduction
- Background of the Study
- Objective of the Research
- Current Issues
- Evolution of the Reporting System
- Survey Result
- Case Study of the Bank Indonesia
- Conclusion and Recommendation
INTRODUCTION (1/2)

Asia-Pacific Finance and Development Institute

Shanghai National Accounting Institute
INTRODUCTION (2/2)
1. BACKGROUND OF THE STUDY

Maps of countries using XBRL

ASEAN Map
OBJECTIVE OF THE RESEARCH

- Current Challenges
- Best Practices and Experiences
- Introduce XBRL in Cambodia
INTRODUCTION TO THE NBC (1/4)

Monetary Authority

Banking and FI’s Regulator

Payment System Oversight
INTRODUCTION TO THE NBC (2/4)
INTRODUCTION TO THE NBC (3/4)

Bank Institutions
- Commercial Banks (37)
- Specialized Banks (15)

Microfinance Institutions
- MDIs (7)
- MFIs (64)
- MFOs (170)

Other FIs
- Representative Offices (7)
- Leasing Companies (12)
- Payment Processors (8)
- Credit Bureau (1)
- Money Changers (2,247)
INTRODUCTION TO THE NBC (4/4)

- Increasing in Size of the Existing Players
- Increasing Complexity of Financial Services
- Increasing Bigger Players in the Market
CURRENT ISSUES (1/5)

**Central bank**
- Inefficient Use of Human Resources
- Manual Data Processing (Half Automation)
- Lack of Data Validation Tools
- Lack of Report Guideline
- Lack of Information Sharing System

**Commercial bank**
- Regulatory Report Burden (Duplicate Report Submission)
### CURRENT ISSUES (3/5)

**MONTHLY REPORT OF UNIFORM COA**

As Of: [Exchange Rate: (USD/KHR)]

<table>
<thead>
<tr>
<th>L1</th>
<th>L2</th>
<th>L3</th>
<th>L4</th>
<th>ACCOUNT DESCRIPTION</th>
<th>Amount</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Cash Due from Banks and Customers</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Cash on Hand and Due From Banks</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Cash in vault and on Hand</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Cash in vault and on Hand – KHR</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Cash in vault and on Hand – USD</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Cash in vault and on Hand – EUR</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Cash in vault and on Hand – JPY</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Cash in vault and on Hand – THB</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Cash in vault and on Hand – HKD</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Cash in vault and on Hand – MYR</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Cash in vault and on Hand – SGD</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Cash in vault and on Hand – Other</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
CURRENT ISSUES (4/5)

MONTHLY REPORT ON BALANCE SHEET

As of:

<table>
<thead>
<tr>
<th>BANK'S NAME</th>
<th>(Exchange Rate 1 USD) = 4,000 (In Million Riels)</th>
</tr>
</thead>
<tbody>
<tr>
<td>ASSETS</td>
<td>Gross Amount in Riel or Translation in Riels</td>
</tr>
<tr>
<td></td>
<td>Riels (KHR)</td>
</tr>
<tr>
<td>2 P2</td>
<td>1</td>
</tr>
</tbody>
</table>

2- Loans & Advances to Non-Bank Customers

2.1. Loans & Advances to State Enterprises and AIR
   2.1.1. Overdrafts
   2.1.2. Loans & Advances to State Enterprises
   2.1.3. Accrued Interest Receivable

2.2. Loans & Advances to Private Sectors and AIR
   2.2.1. Overdrafts
   2.2.2. Commercial Loan
   2.2.3. AIR - Commercial Loan
   2.2.4. Consumer Loans
   2.2.5. AIR - Consumer Loans
# CURRENT ISSUES (5/5)

## MONTHLY REPORT ON CREDITS BY INDUSTRY AND OWNERSHIP IN THE ECONOMIC SECTOR

<table>
<thead>
<tr>
<th>Name of Bank:</th>
<th>By Industry:</th>
<th>By Ownership:</th>
<th>Royal Government Of Cambodia</th>
<th>State-Owned Enterprises</th>
<th>Private Sector</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Central Government</td>
<td>Provincial Government</td>
<td>Local Government</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Financial Enterprises</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Non-Financial Enterprises</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Corporations</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Partnerships</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>1- Financial Institutions</th>
<th>1.1- National Bank of Cambodia</th>
<th>1.2- Depository Institutions</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.2.1- Commercial Banks</td>
<td></td>
<td>1.2.2- Depository Microfinance Institutions</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1.2.3- Other Depository Institutions</td>
</tr>
<tr>
<td>1.3- Other Financial Institutions</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.3.1- Specialized Banks</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.3.2- Licensed Microfinance Institutions</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.3.3- Life Insurance</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

As of: Exchange Rate: 4,000 (In Million Riels)

Form: C-CE-M
### SURVEY RESULT (1/8)

<table>
<thead>
<tr>
<th>Number</th>
<th>In Person</th>
<th>In Percent (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Respondents</td>
<td>109</td>
<td>100%</td>
</tr>
<tr>
<td>Male</td>
<td>53</td>
<td>49%</td>
</tr>
<tr>
<td>Female</td>
<td>56</td>
<td>51%</td>
</tr>
<tr>
<td>Central Bank Officers</td>
<td>60</td>
<td>55%</td>
</tr>
<tr>
<td>Bank Supervision</td>
<td>44</td>
<td>40%</td>
</tr>
<tr>
<td>IT</td>
<td>16</td>
<td>15%</td>
</tr>
<tr>
<td>Banks and Financial Institutions</td>
<td>49</td>
<td>45%</td>
</tr>
</tbody>
</table>
SURVEY RESULT (2/8)

Time Spent on Compiling and Analysis Data

- Compiling Data (%): 38% > 25% 37% > 50%
- Analyzing Data (%): 24% > 25% 26% > 50%
SURVEY RESULT (3/8)

Experience Report Validation Problems

- Have problem: 39%
- Do not have problem: 61%
SURVEY RESULT (4/8)

Application Used to Produce Financial Statement

- Spreadsheet application: 50%
- Highly customized application: 50%
How Regulatory Reports are Generated

- Manually: 30%
- Automatically: 25%
- Half automation: 45%
SURVEY RESULT (6/8)

Perspectives toward Automatic Reporting System

- Good, 87%
- Not Good, 13%
SURVEY RESULT (7/8)

XML and XBRL Awareness

- XML Awareness: 33.94%
- XBRL Awareness: 9.17%
- XBRL/XML: 6.42%
SURVEY RESULT (8/8)

Willingness to Learn XBRL

- Very Likely: 40.37%
- More Likely: 22.02%
- Likely: 22.94%
- Slightly Likely: 5.50%
- Less Likely: 8.26%
CASE STUDY OF THE BANK INDONESIA

- Too many reporting formats
- Weak Data Management Function
- Inflexible System
- Time-consuming and High Maintenance Cost
BI’s SWOT Analysis

**Strengths**
- Open standard
- Completed method

**Weaknesses**
- Large size and high complexity
- Existing system was not capable to support historical analysis

**Opportunities**
- Need to bring in more transparency
- Demand for high speed data analysis

**Threats**
- Lack of technical support
- Absence of reference material for developing taxonomy
BI’S EXPERIENCES
BI’S EXPERIENCES

- Prepare and Plan
- Design and Develop
- Manage and Maintain
- Create and Consume
BI’S EXPERIENCES
VIII. WHY FOLLOW BI’S PRACTICES?
WE SHARE SIMILARITIES

**Issues of the NBC**

- Many and Duplicate Report Formats
- Lack of a Supervisory Reporting System that Adapts to the Changes
- Lack of Information Sharing System that Reduces the Burden of the Commercial Banks

**Issues of the BI**

- Too many reporting formats
- Weak data management function
- Inflexible system
- Time-consuming and high maintenance cost
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>GDP Growth</td>
<td>6%</td>
<td>7%</td>
</tr>
<tr>
<td>Country Category</td>
<td>Lower middle income</td>
<td>Lower middle income</td>
</tr>
<tr>
<td>Credit Growth</td>
<td>21.6%</td>
<td>20.52%</td>
</tr>
<tr>
<td>Deposit Growth</td>
<td>13.6%</td>
<td>21.82%</td>
</tr>
<tr>
<td>Region</td>
<td>East Asia &amp; Pacific</td>
<td>East Asia &amp; Pacific</td>
</tr>
<tr>
<td>Loan-to-deposit (LTD)</td>
<td>92%</td>
<td>100%</td>
</tr>
<tr>
<td>Credit-to-GDP</td>
<td>35%</td>
<td>68.83%</td>
</tr>
<tr>
<td>Deposit-to-GDP</td>
<td>32.88%</td>
<td>68.44%</td>
</tr>
<tr>
<td>Doing Business Index</td>
<td>128</td>
<td>128</td>
</tr>
<tr>
<td>GNI Per Capita</td>
<td>USD 3,663</td>
<td>USD 1,300</td>
</tr>
<tr>
<td>Inflation</td>
<td>9.5%</td>
<td>2.9%</td>
</tr>
<tr>
<td>NPL</td>
<td>2.49%</td>
<td>2.4%</td>
</tr>
<tr>
<td>ICT/GDP</td>
<td>2.2% (2008)</td>
<td>0.05% (2002)</td>
</tr>
</tbody>
</table>

Macro Factors Comparison
### MICRO INDICATORS

<table>
<thead>
<tr>
<th></th>
<th>NBC</th>
<th>BI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Independence</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>BOD Structure</td>
<td>Diverse Members</td>
<td>All from BI</td>
</tr>
<tr>
<td>Government Influence</td>
<td>MEF</td>
<td>OJK, IDIC</td>
</tr>
<tr>
<td>Private Sector Influence</td>
<td>Bank Association</td>
<td>Bank Association</td>
</tr>
<tr>
<td>Law and Regulations on Public Info Disclosure</td>
<td>Access to Info (Draft), Regulations of NBC and SECC</td>
<td>Public Info Disclosure Act</td>
</tr>
<tr>
<td>Banking Infrastructure</td>
<td>Young</td>
<td>Matured</td>
</tr>
<tr>
<td>Banking Institutions</td>
<td>Conventional Banks</td>
<td>Assorted types of Banks</td>
</tr>
<tr>
<td>Tasks</td>
<td>NBC</td>
<td>BI</td>
</tr>
<tr>
<td>--------------------------------------------</td>
<td>-----</td>
<td>-----</td>
</tr>
<tr>
<td>Define and implement monetary policy</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Issue banknote</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Conduct foreign exchange operations</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>Hold and manage official reserves</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Act as the fiscal agent for the government</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Promote stability of financial system</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Supervise and regulate banks</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Implement consumer protection laws</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Promote the smooth operation of the payments system</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Collect statistical information</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Participate in international monetary institutions</td>
<td>Yes</td>
<td>Yes</td>
</tr>
</tbody>
</table>
### MICRO INDICATORS (CON.)

<table>
<thead>
<tr>
<th>Monetary Policy Instruments</th>
<th>NBC</th>
<th>BI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Open market operation</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Interest rate</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>Reserve requirement</td>
<td>Yes</td>
<td>Yes</td>
</tr>
</tbody>
</table>
SUCCESS INDICATORS OF THE NBC
NBC’S SUCCESS FACTORS

- Human Resource Development
- National and International Support Framework
- Dynamic Force toward International Best Practices
- Strong COA as a Foundation
NBC’S SUCCESS FACTORS (1/4)

- Human Resource Development
NBC’S SUCCESS FACTORS (2/4)

- National and International Support Framework

- Ecommerce Law (Draft 2016)
- Law on Access to Information (Draft 2017)
- Disclosure Regulation issued by NBC
- Disclosure Regulation issued by SECC
- E-ASEAN Framework 2000
- ASEAN ICT Master Plan 2020
NBC’S SUCCESS FACTORS (3/4)

- Dynamic Force toward International Best Practices
- Basel Core Principles
- Basel II and Basel III Framework
- IFRS Adoption
- Best Practices on Corporate Governance, Financial Literacy and Consumer Protection
NBC’S SUCCESS FACTORS (4/4)

- Strong COA as a Foundation

- Well-developed by the Experts
- Properly fits the Banking Industry

Chart of Account Manual

For

Banking and Financial Institutions
XBRL IMPLEMENTATION ROADMAP
<table>
<thead>
<tr>
<th>Step</th>
<th>Activities</th>
<th>Timeframe</th>
</tr>
</thead>
</table>
| **Promote Awareness** | • Seminar, conference, and internal meeting  
                       • Perceived costs and benefits  
                       • Feedback                                                              | 12 Months |
| **Learn and Design**    | • Working Group  
                       • Learn taxonomy, XBRL foundation, and study visit  
                       • Design and develop taxonomy                                          | 24 Months |
| **Proof of Concept**   | • Separate a small taxonomy  
                       • Invite all banks to submit the data with the taxonomy  
                       • Use the validation tools to verify the information                   | 6 Months  |
| **Pilot Test**         | • Use the full set of the taxonomy  
                       • Test several biggest/smallest banks  
                       • Validate the information                                               | 6 Months  |
| **Deploy**            | • Create and verify XBRL instance document (FIs)  
                       • Submit the instance  
                       • Review the instance (NBC)                                              |           |
EXPECTED ADOPTION TIMELINE

**NBC**
- 2017
- 3.5 Years for Implementation
- 2020
- 1/2 Year for Pilot Test
- 2021

**BI**
- 2010
- 3 Years for Implementation
- 2013
- 1 Year for Pilot Test
- 2014
CONTINGENCY PLAN

XBRL-based Reporting System

XML-based Reporting System
<table>
<thead>
<tr>
<th>Internal Users</th>
<th>Information Sharing</th>
<th>Validation</th>
<th>Automated Consolidation</th>
<th>High-speed Data Analysis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Licensing Dept.</td>
<td>- Timely submit regular reports to management</td>
<td>- Validate periodic financial/transaction reports</td>
<td>- Automation in report consolidation and eliminate manual process</td>
<td>- Structured information take less time to analyze</td>
</tr>
<tr>
<td>Statistic Dept.</td>
<td>- Timely share information with related departments and ministries</td>
<td>- Reducing wasting time</td>
<td>- On-demand consolidation after the reports have been submitted by FIs</td>
<td>- On-demand analysis of the information made faster with the automation system</td>
</tr>
<tr>
<td>Onsite Supervision Dept.</td>
<td>- Receive timely reports from the departments in charge</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Offsite Supervision Dept.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Legal Dept.</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td>External Users</td>
<td>Information Sharing</td>
<td>Validation</td>
<td>Automated Consolidation</td>
<td>High-speed Data Analysis</td>
</tr>
<tr>
<td>----------------</td>
<td>---------------------</td>
<td>------------</td>
<td>-------------------------</td>
<td>-------------------------</td>
</tr>
<tr>
<td>Research Dept.</td>
<td></td>
<td></td>
<td></td>
<td>- Structured information take less time to analyze</td>
</tr>
<tr>
<td>FIU</td>
<td>- Receive timely reports from the departments in charge</td>
<td>N/A</td>
<td>N/A</td>
<td>- On-demand analysis of the information made faster with the automation system</td>
</tr>
<tr>
<td>MEF</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FIs</td>
<td>- Submit periodic report on time</td>
<td>- Validate periodic financial report</td>
<td>- Consolidate financial report from various branches</td>
<td>- Timely analysis on their own performance</td>
</tr>
<tr>
<td></td>
<td>- Publish annual report</td>
<td>- Reducing errors</td>
<td>- Eliminate manual process</td>
<td></td>
</tr>
</tbody>
</table>
## CHALLENGES OF THE IMPLEMENTATION

### Internal

**Issues**
- Limitation of HR and Budget
- Inaccurate Plan and Activities

**Solutions**
- Carefully Endorse the Working Group Member
- Carefully Study the Optimum Option
- Extend the Project Timeline

### External

**Issues**
- Government and Private Sector Influence
- Lack of Consulting Firm

**Solutions**
- Disseminate Knowledge
- Enhance Cooperation
CONCLUSION

- Information Sharing Platform
- High-end Data Management System
- Solve the Issues
THANKS FOR YOUR KIND ATTENTION!

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