ANALYSIS OF THE DATA QUALITY OF SERVICE TRANSACTION ON INDONESIA'S BALANCE OF PAYMENTS

Aisyah Istiqomah[1]; Aria Farah Mita[2]
University of Indonesia, Depok[1,2]
Email : aisyah.isti@gmail.com[1]; aria.farahmita@ui.ac.id [2]

ABSTRACT

This study aims to analyze the root causes of data quality problems in Foreign Exchange Reporting (LLD) as the primary data source used in the preparation of the Indonesian Balance of Payments (NPI), especially in service transactions. The research method used is qualitative with a case study approach. Data collection was carried out through interviews, observation, and document analysis. The results of the study concluded that the data quality problem of LLD reporting was data accuracy. The root causes of the data quality problem of LLD reporting come from both the internal and external sides of Bank Indonesia. The root causes from the internal side of Bank Indonesia are complex transaction purpose codes (STT), acceleration of the development of service transaction, and manual data accuracy checks. While the root causes of the data quality problem from the external side of Bank Indonesia is the routine mutation of frontliner employees of the reporting bank and the lack of training conducted by the Head Office of the reporting bank. To address the root of the problem, several strategies are recommended to be implemented, namely adjustments to the STT list, training to LLD Account Officers, preparation of automated data accuracy check tools, preparation of e-learning and handbook about LLD reporting, as well as additional policies related to training obligations by Head Office of the reporting bank.

Keywords : The Indonesian Balance of Payments; Data Quality; Foreign Exchange Reporting

ABSTRAK

Penelitian ini bertujuan untuk menganalisis akar permasalahan kualitas data pada Laporan Lalu Lintas Devisa (LLD) sebagai sumber data utama yang digunakan dalam penyusunan Neraca Pembayaran (NPI) Indonesia, khususnya dalam transaksi jasa. Metode penelitian yang digunakan adalah kualitatif dengan pendekatan studi kasus. Pengumpulan data dilakukan melalui wawancara, observasi, dan analisis dokumen. Hasil penelitian menyimpulkan bahwa masalah kualitas data pelaporan LLD adalah akurasi data. Akar masalah kualitas data pelaporan LLD berasal dari sisi internal dan eksternal Bank Indonesia. Akar permasalahan dari sisi internal Bank Indonesia adalah kode tujuan transaksi (STT) yang kompleks, akselerasi perkembangan transaksi jasa, dan pengecekan akurasi data secara manual. Sedangkan akar masalah kualitas data dari sisi eksternal Bank Indonesia adalah mutasi rutin pegawai frontliner bank pelapor dan kurangnya pelatihan yang dilakukan oleh Kantor Pusat bank pelapor. Untuk mengatasi akar masalah tersebut, beberapa strategi yang direkomendasikan untuk diterapkan, yaitu penyesuaian daftar STT, pelatihan kepada Account Officer LLD, penyiapan alat pengecekan akurasi data otomatis, penyiapan e-learning dan handbook tentang pelaporan LLD, serta sebagai kebijakan tambahan terkait kewajiban pelatihan oleh Kantor Pusat bank pelapor.

Kata Kunci : Neraca Pembayaran Indonesia; Kualitas Data,; Laporan Lalu Lintas Devisa

INTRODUCTION

According to Sugiyono (2002) in the book Balance of Payments, Concept, Methodology and Application, a country's internal and external conditions can reveal its economic health. The development of the actual sector, including production, consumption, and investment, reflects internal conditions. In addition to the real sector, the monetary sector, such as the money supply and inflation rate, provides insight into internal conditions. Regarding external conditions, a country's economic health can be gauged by examining its balance of payments.

The balance of payments is "…a statistical statement that summarizes transactions between residents and non-residents during a period" (International Monetary Fund, 2009, p.9). In addition to being used to gauge the health of a nation's economy, the balance of payments is one of the most important indicators and data sources used to formulate macroeconomic policies. In addition, international institutions use the data contained in the balance of payments to assess a country's economic health. Bank Indonesia, the country's central bank, compiles the balance of payments for Indonesia under the Indonesian Balance of Payments (NPI).

Given the significance of the NPI in assisting with the formulation of macroeconomic policies in Indonesia and its use as one of the country's health indicators, the quality of the data used to support the compilation of the NPI is one of the essential considerations. The Bank's Foreign Exchange Reporting (LLD) is among the preponderance of data sources (9 of 12 components or 75%) used to support the preparation of the NPI, particularly for service transactions. One of the reports administered by Bank Indonesia is LLD Bank. The Department of Report Management and Compliance (DPKL) of Bank Indonesia uses LLD Bank data to facilitate the preparation of the NPI.

During 2022, DPKL, as the department authorised to collect LLD Bank data, discovered numerous inaccuracies in the LLD Bank report submitted by foreign exchange bank, including errors relating to the determination of Transaction Purpose Code (STT), as depicted in Figure 1.1. Figure 1.1 depicts an STT determination error in which a service transaction (STT code x511) is reported as a dividend payment (STT

code x725). This STT determination error may result in inaccurate NPI recording of service transactions (overstated/understated).

Based on the preceding, this study aimed to analyse the use of LLD Bank reports as primary data in supporting the preparation of the NPI, particularly for service transactions, and to analyse the root causes that affect the quality of LLD Bank report data and make recommendations for follow-up or improvements. No research has been discovered that analyses the data source and quality of the data source used to support the compilation of the NPI throughout the reviewed literature.

The study's findings indicated to provide information to Bank Indonesia, particularly DPKL and the Department of Statistics (DSta) as the compiler of the NPI regarding matters that can be improved in the process of collecting LLD data, and serve as a reference for academics conducting additional research. The research is also expected to provide stakeholders or users of NPI data with a comprehension of the data collection process for single of the transactions in the NPI and the data processing process that has thus far been conducted.

LITERATURE REVIEW AND STUDY FOCUS

Data and Data Quality

Data is an information system's collection, recording, storage, and processing of facts (Romney *et al.*, 2021). Batini *et al.* (2009) define data as a physical object that can be stored, retrieved, and described using software and transmitted over a network. To support appropriate decision-making, the data used must be high-quality data that has been organised and analysed to provide meaning and context to support decision-making (Romney *et al.,* 2021). The data processing cycle is required to transform data into information.

The data processing cycle is an operation carried out on data to generate meaningful and pertinent information (Romney *et al.,* 2021). To produce quality information, the input data must be quality data, which must satisfy the criteria of accuracy, relevancy, representation, and accessibility (Wang & Strong, 1996).

Indonesia's Balance of Payments (NPI)

According to the Balance of Payments and International Investment Position Manual, Book Sixth Edition, published by the International Monetary Fund (IMF, 2009), a Balance of Payments is defined as a statement that summarises economic transactions

between residents and non-residents during a specific period and consists of accounts for goods and services, primary income, secondary income, capital accounts, and financial accounts. According to Bank Indonesia's Department of Statistics (DSta) (2020), the balance of payments encompasses the current account, capital account, and financial account transactions.

The current account includes products, services, and primary and secondary income transactions. Financial transactions include direct investment transactions, portfolio investments, financial derivatives, other investments, and foreign exchange reserves. Capital transactions include capital transfer transactions and the acquisition of nonfinancial assets. The study focused on the current account, particularly service transactions.

In the balance of payments, services transactions represent the difference in value between exports and imports of services. According to the International Monetary Fund (2009), service transactions are the consequence of a production activity that modifies the state of consumption units (transformation services) or facilitates the exchange of financial products or assets (margin services). Accounting for service transactions in economic transactions is recognised when services are delivered. In each accounting period, the provision of services is recorded using the accrual method, where the value of service transactions must be recognised when rendered (IMF, 2009).

In the balance of payments, services transactions include manufacturing services, maintenance and repair services, transportation services, travel services, construction services, insurance services and pension funds, financial services, use of intellectual property, telecommunications, computer and information services, other business services, personal, cultural, and recreational services, and government services (Dsta Bank Indonesia, 2022). According to Sugiyono (2002), the balance of service transactions within the balance of payments is typically negative. This indicates that Indonesia still imports more services (payments) than it exports (receipts) in service transactions.

Bank Indonesia compiles service transactions using primary and secondary data sources. The LLD Bank Report data is the source of information for nine of the twelve categories of service transactions listed in the NPI. The remaining three (25%) are derived from secondary data sources (Data Bank Indonesia, 2022). LLD is defined by

Bank Indonesia Regulation (PBI) No.21/15/PBI/2019 on Monitoring Foreign Exchange Activities of Banks and Customers as the transfer of financial assets and liabilities between residents and non-residents and the transfer of foreign financial assets and liabilities between residents. Based on Law No. 24/1999 on Foreign Exchange Flows and Exchange Rate System, Bank Indonesia is permitted to request data and information about LLD activities conducted by all residents, in this instance, banks and customers.

Every month, foreign exchange banks report LLD activities conducted by banks and consumers (individuals, businesses, and governments) to Bank Indonesia through the LLD Bank reporting website. Foreign exchange bank are required by PBI 21/15/PBI/2019 to report LLD activities ultimately, accurately, and on time. According to the same PBI, the LLD Bank report consists of a Transaction Report (LLD 1), a Position Report (LLD 2), a Special Account Transaction Report (Reksus) of Natural Resources Export Proceeds (DHE SDA) (RKD 1), a DHE SDA Reksus Position Report (RKD 2), and a DHE and Foreign Exchange Import Payment (DPI) Report (LLD 7). The research will concentrate on the LLD 1 report as a source of information to support the development of the NPI.

Cash is recorded with LLD Bank data received from foreign exchange banks. The data consists of foreign exchange bank are incoming and outgoing transfer data for their customers' interests and transactions. Foreign exchange bank are third parties submitting reports to Bank Indonesia regarding LLD transactions. The quality of the data used to support the preparation of the balance of payments will be determined by the data provided by foreign exchange bank to Bank Indonesia.

Redman (1998) demonstrates that incorrect or inappropriate data that generates uncertainty regarding the quality of available data results in less effective decision-making. Bowo s (2019) state that poor data integrity also hurts business performance. This further demonstrates the significance of the quality of data used in the compilation of the NPI so that it can be used as a precise indicator of economic health and become a source of high-quality data to support the formulation of macroeconomic policies in Indonesia. So that prepared macroeconomic policies can be compatible with the prevailing economic conditions.

Cahyono and Sucahyono's (2020) research on data quality revealed that there are still data inaccuracies in the University of Indonesia scholarship system; therefore,

enhancements are required to make the data usable for strategic decision-making. According to Aprianty (2018), the quality of information systems directly impacts individual decision-making as it affects the quality of the produced data.

RESEARCH METHOD

Method is a method of work that can be used to obtain something. While the research method can be interpreted as a work procedure in the research process, both in searching for data or disclosing existing phenomena (Zulkarnaen, W., et al., 2020:229). The research was conducted using a qualitative method and a case study approach at Bank Indonesia, the compiler of the NPI, using a case study approach. The conducted case study is a problem-solving case study that seeks to identify the root cause of the problems and the subsequent steps that can be taken to eliminate the root cause. In the case study, qualitative data collection was collected using interviews, observation, and document analysis (Salim & Syahrum, 2012).

The study was conducted through interviews, observation, and document analysis. Researchers use interviews to collect data or information pertinent to their research topic (Creswell, 2014). The interview technique used is a semi-structured interview, in which the interview is based on both prepared questions and random queries in response to the respondents' responses.

Online and offline interviews were conducted with selected respondents. Respondents were chosen based on their involvement with the research topic. The selected respondents include DPKL officials and technical staff who handle LLD reporting and are directly engaged in LLD reporting activities at Bank Indonesia, and DSta officials and staff who are directly involved in data processing for the preparation of the NPI. In the conducted study, interviews were conducted to:

1. The Assistant Director of the NPI Statistics Division and the International Investment Position (PII) (D1);
2. The Assistant Director (D2) of the LLD Team for the Bank
3. The LLD Reporting Executive and IT Team of the Bank (B1)
4. Executive Reporting on Bank LLD (B2)

Observation and analysis of documents. Observations are performed to observe the LLD reporting business process in capturing economic transaction data to support NPI preparation and the DSta business process in categorising economic transactions

obtained from LLD Bank into NPI accounts, focusing on service transactions. In the meantime, document analysis was performed to support the evaluation process and contribute evidence to bolster the case study's validity.

The research utilised primary and secondary data, which was commonly referred to as blended data. Primary data was gathered through interviews with the respondents; on the other hand, secondary data was gathered by analysing extant supporting documents. After interviewing, observing, and analysing documents to collect data, the data was analysed using the Miles & Huberman (1994) interactive model, including data collection, reduction, data presentation, and conclusion. The findings of the collected data was utilised to aid in problem-solving. The problem-solving process implemented refers to The McKinsey Problem Solving Methodology outlined in The McKinsey Way (Rasiel, 1999), with the process beginning with defining the problem, finding the root causes, utilising a "hypothesis-driven" process, breaking down and structuring the analysis with the "issue tree," and concluding with proposing a solution.

RESEARCH RESULTS AND DISCUSSION

Foreign Exchange Reporting (LLD) Process

As macroeconomic statistics were used by both internal and external parties of Bank Indonesia, interviewee D1 explained that the values included in the NPI must be granularly (individually) accountable. This was consistent with interviewee D 2, who explained that the quality of data from the NPI was crucial since numerous parties utilised it. The data employed in preparing the NPI were crucial from the resource persons' D1 and D2 explanations. DPKL, as the department responsible for data collection, must be concerned about the quality of LLD reporting data, which was among the preponderance of data used to support the preparation of the NPI, particularly for service transactions. The LLD reporting administered by DPKL consists of four types of reports: the LLD Bank report, the LLD Non-Bank Institutions report (LBB), the LLD Foreign Debt report (ULN), and the LLD Prudential Principles Implementation Activities report (KPPK).

This reserach focused on LLD Bank report, the primary data sources, and the majority (9 out of 12 components) used to prepare the NPI for service transactions. The reporting bank submitted the LLD Bank report to Bank Indonesia online through the LLD Bank reporting website. The reporting bank submitted monthly information

regarding incoming and outgoing transactions, either those conducted by the reporting bank's customers or those conducted by the reporting bank that affected the bank's offshore financial assets and financial liabilities.

Based on the LLD Bank process observations, it is known that the LLD Bank website used to acquire LLD Bank data from reporting banks has been validated. Validation on the LLD Bank website emphasises the veracity of the report format submitted by the reporting bank and validation between report forms relative to the accuracy of the submitted data. For instance, the validation on the LLD Bank website for the Taxpayer Identification Number (NPWP) must be filled with 15 numeric digits; if the NPWP column is only filled with 14 numeric digits, the report submitted by the bank will be automatically rejected due to an improper format.

Each month, the foreign exchange bank submits five LLD Bank reports to Bank Indonesia: LLD 1, LLD 2, RKD 1, RKD 2, and LLD 7. The LLD 1 report prepares the NPI for service transactions using LLD Bank reporting data. According to the document analysis results, the LLD 1 report contains 24 fields that the reporting bank must complete for each transaction. The fields include the bank code, the date, month, and year of the transaction, the account code, the recipient and payer status, the recipient and payer category, the financial relationship between transaction actors, the debtor country code, the transaction currency, the transaction value, the recipient and payer actors, the recipient and payer identity type, the recipient and payer identity number, the sending bank, the receiving bank, the transaction details, and the supporting document password information. The presentation of these fields is depicted in Figure 1.2.

The LLD 1 report fields filled in by the reporting bank for each transaction, as depicted in Figure 1.2, can provide complete information regarding LLD transactions conducted by the reporting bank and the customer if they are filled in correctly and accurately. When the LLD transaction was conducted, who conducted the LLD transaction, what transaction was conducted, and where the transaction was conducted have all been captured by the fields. In addition, the filled fields can characterise the flow of foreign exchange itself, whether there is an inflow of foreign exchange into the country or an outflow.

Data Quality Issues of Foreign Exchange Reporting (LLD)

The interview process with the resource persons, observation of the business process of Bank LLD reporting, and document analysis of documents related to Bank LLD reporting, one of which is the result of Bank Indonesia's examination of the reporting bank, was used to gather information about the problems encountered by Bank Indonesia with the quality of LLD Bank reporting. From the sources' responses, it can be deduced that there were issues with the integrity of LLD Bank reporting data, specifically regarding data precision. Based on the document analysis results, it was determined that many reporting banks still need to correct their STT encoding and selection in LLD Bank reporting. This demonstrates that the LLD Bank transaction data reported by the reporting bank must be more precise or better able to reflect the actual transactions conducted by the reporting bank and its customers.

This encoding and STT selection error occured due to several factors determined by the study. Figure 1.3 depicts the STT selection errors uncovered by the document analysis where the causal factors were internal to Bank Indonesia and external to Bank Indonesia. Figure 1.3 demonstrates that the reporting bank made an error reporting STT services. For instance, in a transaction reported with STT code 2580, where the STT described transactions related to Legal, Accounting, Management Consulting, and Public Relations services, it turned out that the transaction relates to Labour Income (STT code 2163) after further confirmation with the reporting bank and a review of the transaction's supporting documents. Alternately, in other transactions, such as those reported with STT code 2630, STT related to Trade-related Services, it turns out the transaction is a Working Capital/Cash Call transaction with STT code 2809 (including receipt/payment of funds from the parent company/investor to be used to purchase raw materials or wages).

More in-depth interviews were conducted to uncover additional information to identify the primary cause of data quality issues in the LLD Bank reporting, specifically data accuracy. The interviewee's explanation was corroborated with data from the document analysis procedure and observation. Figure 1.4 depicts the two most likely potential causes of Bank Indonesia's LLD reporting data quality issues, namely internal and external causes. Possible internal causes include DPKL and Dsta; on the other hand, potential external causes include reporting institutions and transaction customers. Figure

1.5 analyses the underlying causes of problems within Bank Indonesia, and Figure 1.6 illustrates the origins of Bank Indonesia's external problems.

Root Causes of Foreign Exchange Reporting Data Quality

Seven hypothesised root causes of problems with the quality data of the LLD Bank reporting data, particularly service transactions, are depicted in Figures 1.5 and 1.6 of the root cause diagram, as summarised in Table 1.1. After delineating the potential root causes, additional interviews, observations, and document analysis were conducted to gather sufficient data for identifying the root causes. Based on the outcomes of interviews, observations, and document analysis, the purported fundamental causes of recording service transactions with a Cash Basis and the limited information obtained was ruled out.

The data source for service transactions, primarily LLD Bank reporting data with cash basis recording, is acceptable. Despite being distinct from the concept described in the Balance of Payments and International Investment Position Manual, Sixth Edition, countries were permitted to make adjustments in the compilation of the NPI to account for the circumstances of the country in question. Bank Indonesia is currently attempting to combine data sources obtained from the LLD reporting of Banks (cash basis) and the LLD reporting data of Non-Bank Institutions (LBB) (accrual basis) to generate more accurate projections. In addition, LLD LBB data that employs accrual recording is not used because accrual data sources cannot yet project the number of LLD transactions conducted by the state due to the limited number of reporters.

In contrast to the alleged root cause of the limited information acquired, this root cause was ruled out because neither Bank Indonesia nor the reporting bank can resolve it. Alternatively, the problem was out of Bank Indonesia's and the reporting bank's control (uncontrollable factor) because it is within the customer's control. Based on this explanation, it is determined that the problem with the quality of LLD Bank reporting data, namely its accuracy, is due to the following five root causes:

Internal Bank Indonesia

Complex of The Transaction Purpose Code (STT) - IB1

Appendix II of PADG Number 24/26/PADG/2023 on Amendments to the Regulation of Members of the Board of Governors Number 21/28/PADG/2019 on Monitoring Foreign Exchange Flows Activities of Banks and Customers reveals that the

STT provided by Bank Indonesia for Bank LLD reporting is approximately 219 STT. Observations revealed that, in practice, reporting institutions frequently have difficulty determining the appropriate STT for customer transactions. As shown in point 2 of Figure 1.5, the number of STTs and complex definitions are one of the root causes of data quality issues. The number of STTs and the complexity of their definitions make it difficult for reporting bank to select STTs that are suitable for customer transactions. In addition, the extant STTs are sometimes required to accommodate new LLD transactions conducted by customers and reporting banks, causing reporting banks to need help determining the appropriate STT.

Acceleration of The Development of Service Transaction - IB2

Based on the interviews, it was determined that AO LLD Bank still needed clarification when providing answers to the reporting bank regarding the selection of STT for customer transactions. Based on the findings of interviews and observations, this is the case because Figure 1.5, point 3, depicts the evolution of LLD transactions conducted primarily by customers. According to information obtained from resource person D2, derivative transactions and service transactions are experiencing the most accelerated growth based on the data he possesses. In addition, one AO's comprehension and knowledge may differ from that of another AO. Consequently, there is a disparity in the level of comprehension among AOs, which poses a risk of different responses to the reporting bank for the same question type.

Manual Data Accuracy Check - IB3

The accuracy of LLD Bank reporting data is examined through Clarification I activities. The LLD Bank Team annually administers clarification I to 28 reporting banks with the maximum volume of foreign exchange transactions. These 28 banks account for more than 90 per cent of all foreign exchange transactions conducted by reporting banks and customers in Indonesia. The Clarification I activity begins with converting the reporting bank's text file data into Excel. The LLD Bank Team will then conduct an assessment using Microsoft Excel. Examining each field of each transaction record reported by the reporting bank constitutes the examination. Based on observations of the LLD Bank business process, it is known that this process is still performed manually, as depicted in Figure 1.5, point 4, where the LLD Bank Team AO checks the encoding and STT of each of the 24 fields reported in a single record.

This manual inspection poses a moderately high threat to data veracity. Due to the vast number of transaction records that must be reviewed, the likelihood of human error at AO LLD Bank is also exceptionally high. Moreover, everything is still performed manually, with the AO LLD Bank viewing transaction records field by field. In addition to the high risk of human error, this manual check requires more time than the automated Clarification II (check for transaction prevalence).

Eksternal Bank Indonesia

Problems from the Reporting Bank Side - EB1 and EB2

According to the findings of Bank Indonesia's document analysis of the reporting bank's onsite inspection report, one of the internal obstacles encountered by the reporting bank is its employees' inability to comprehend LLD Bank reporting. This barrier is caused by a combination of factors, including the common mutation carried out by the reporting bank for its frontline employees (EB1), as depicted in Figure 1.6 point 2, and the lack of training carried out by the Head Office of the reporting bank to its branch offices in various regions (EB2), as depicted in Figure 1.6 point 3. The results of the observations made, and the preparation of the LLD Bank report by the reporting bank begin with the frontline employees. When employees in various branches of the reporting bank who manage customers who transact LLD complete the data required by the reporting bank for LLD Bank reporting, this officer will also determine the applicable STT. The head office of the reporting bank will then consolidate the branch office data before submitting it to Bank Indonesia.

The hazards posed to the reporting bank by common mutations performed by the reporting bank. Frontline personnel tasked with accumulating LLD Bank transaction data must thoroughly understand LLD Bank reporting. This is because the frontline employee is one of the employees who will enter the LLD Bank transactions into the reporting bank's system. The knowledge transfer process of the reporting bank must be adequate to disseminate comprehensive information so that the frequent turnover of frontline employees does not compromise the quality of the LLD Bank reporting data submitted. In addition, the varying levels of comprehension among branch office employees impact the quality of the LLD Bank reporting data submitted. Data submitted by branch office employees with a lower level of comprehension than other employees will be of lower quality.

Concerning the issue of different levels of understanding, training and transfer of knowledge from the reporting bank's head office to the branch office are crucial to ensuring that the level of understanding of the reporting bank's employees at head office and branches and branches with one another is identical, particularly given the frequent turnover of frontline employees at bank branches. However, based on the results of interviews with resource person B2, it is known that most reporting institutions still need to implement routine socialisation or knowledge transfer to branch offices.

Strategies to Address LLD Reporting Data Quality Issues

According to Wang & Strong (1996), the requirements and categories of quality data are relevancy, accuracy, representation, and accessibility. However, due to data accuracy issues, LLD Bank's reporting data needs to meet the requirements and categories of quality data. Relevance (data pertinent to the tasks of data users), representation (data presented plainly), and accessibility (data availability) are the only dimensions of data quality possessed by LLD Bank data at this time. For Bank LLD reporting data to become accurate enough to support the preparation of the NPI, particularly for service transactions, the underlying cause of the problem must be resolved.

Strategies to Overcome Problems from Internal Bank Indonesia

Complex The Transaction Purpose Code (STT)

The underlying cause of IB1 is the policy issued by Bank Indonesia to regulate the reporting procedures for LLD Bank data by the reporting bank to Bank Indonesia. Apendix II of PADG Number 24/26/PADG/2022 contains a list of STTs that may be utilised by reporting bank. DPKL can coordinate with DSta, PADG Number 24/26/PADG/2022 proprietor, to revise the STT list to resolve the problems associated with this STT. Adjustments can be made by regrouping STT, updating the list of STT to reflect the evolution of banking transactions, simplifying the definition language to make it easier for bank employees to understand the purpose of the intended transaction, and rechecking for STT that is no longer relevant so they can be eliminated.

AO LLD Bank's understanding of the development of service transactions

The development of banking transactions necessitates that AO LLD Bank, as the executor of the reporting support, comprehends or is familiar with every transaction the bank may execute. The root cause of IB2 can be addressed by organising specific

socialisation or training related to derivative transactions and service transactions for LLD Bank AOs, compiling a list of Questions and Answers (QnA) about LLD Bank reporting, and organising knowledge sharing between LLD Bank AOs to equalise their level of understanding.

Manual Data Accuracy Check

The root cause of IB3 problems associated with manual data accuracy checks can be attempted to be resolved by coordinating with DSta to develop specifications for checking the accuracy of LLD 1 report data and by coordinating with the Digital Services and Cyber Security Department (DLDS) and DSta to provide automation tools for checking data accuracy and checking data prevalence (Clarification II) using the specifications that have been developed.

Strategies to Overcome Problems from External to Bank Indonesia

Routine Frontliner Mutation

The root cause of EB1 problems originating from Bank Indonesia externally can be eliminated by developing e-learning regarding Bank LLD reporting, coordinating with the reporting bank to deliver the e-learning to employees who handle LLD Bank reporting, and recommending that the reporting bank compile a LLD Bank reporting database. The database contains transactions frequently performed by consumers from the branch office, which can assist new frontline employees with Bank LLD data entry. In addition, Bank Indonesia may suggest that the reporting bank create a guide for LLD Bank reporting. The handbook can be compiled by including the technical procedures for LLD Bank reporting using the bank's internal system, a summary of the most frequently used STTs of the reporting bank, and other provisions about LLD Bank reporting.

Lack of Training Provided by the Head Office of the Reporting Bank

The root cause of the EB2 issue is the absence of training provided by the reporting bank (head office) to the reporting bank branches in different regions. This results in differing interpretations among employees responsible for LLD Bank reporting. Bank Indonesia can provide recommendations or even create a policy requiring the reporting bank, in this instance, the head office bank, to training all reporting bank branch offices related to LLD Bank reporting to address the root cause of the EB2 problem. This training activity can be implemented at a minimum frequency;

for instance, at least once a year or when necessary, such as when there are policy changes.

CONCLUSION

Based on interviews with four interviewees, it was determined that LLD Bank reporting has data quality issues in the accuracy dimension. In other words, the LLD Bank reporting data must be enhanced to reflect the actual state of affairs. Based on the various interview processes, it can be concluded that Bank Indonesia's internal and external stakeholders, in this instance, the reporting bank and the customer, were responsible for LLD Bank's data quality issues. The STT determination error was the most significant issue with LLD Bank reporting. The STT error submitted by the reporting bank would affect the recording (overstated/understated) of service transactions in the NPI.

The internal and external root causes of problems from Bank Indonesia were three and two, respectively. Complex Transaction Purpose Code (STT), acceleration of the development of service transactions, manual data accuracy check, common mutation of reporting frontliner bank, and lack of training provided by head office reporting bank to report branch offices are the five root causes. Adjusting the STT list, conducting socialisation and training activities for Bank LLD AOs, compiling QnA and knowledge sharing, compiling specifications for checking the accuracy of LLD 1 reporting data and providing automation tools for checking the accuracy of Bank LLD data, compiling e-learning, databases, and handbooks related to Bank LLD reporting, and compiling policies can be implemented to address the root cause of the issue.

Suggestions for future research include using the completed research as a guide for similar research with Wang & Strong's (1996) data quality dimensions and research on the quality of other transaction data sources in the NPI, such as goods transactions. The research can also serve as a reference for data quality research on data sources used to support the compilation of the NPI by other agencies/institutions, including the BPS, Ditjen Immigration, and the Ministry of Finance.

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FIGURE AND TABLE

Reported by foreign exchange bank:

Rek	SPn	KPn	SPb	KPb	HK	STT	Valuta	Nominal
3C	ID	E0	US	E0	N	1725	USD	100.000,0

What it should be:

Rek	SPn	KPn	SPb	KPb	HK	STT	Valuta	Nominal
3C	ID	E0	US	E0	N	1511	USD	100.000,0

Figure 1.1 Example of Data Transaction on LLD Reporting
Sumber: DPKL, Bank Indonesia (2022) has been reprocessed.

a	b	c	d	e	f	g	h	i	j	k	l	m	n	o
Kd.Bank	Tahun	Bulan	Tgl.	No. Identifikasi	Rek	SPn	KPn	SPb	KPb	HK	NDK	Valuta	Nilai Transaksi	STT

p	q	r	s	t	u	v	w	x	y
Pelaku Penerima	Id Pn	No. Id Pn	Pelaku Pembayar	Id Pb	No. Id Pb	Bank Pembayar	Bank Penerima	Keterangan Detail Transaksi	Info DP

Figure 1.2 LLD Reporting Data Format
Sumber: DPKL, Bank Indonesia (2022), has been reprocessed.

Rek	SPn	KPn	SPb	KPb	Valuta	Nilai Transaksi	STT Dilaporkan	STT Seharusnya	Keterangan
3C	CN	E0	ID	E0	CNY	7.499.000,0	2580	2163	Income
3C	CN	E0	ID	E0	CNY	5.331.000,9	2580	2163	Income
4B	ID	E0	HK	E0	IDR	255.538.000.000,0	2630	2809	Working Capital
4B	ID	E0	HK	E0	IDR	255.880.000.000,0	2630	2809	Working Capital
4B	ID	E0	HK	E0	IDR	182.000.000.000,0	2630	2809	Working Capital
4B	ID	E0	HK	E0	IDR	224.920.000.000,0	2630	2809	Working Capital
4B	ID	E0	HK	E0	IDR	250.000.000.000,0	2630	2809	Working Capital
4B	ID	E0	HK	E0	IDR	257.000.000.000,0	2630	2809	Working Capital
4B	ID	E0	HK	E0	IDR	269.000.000.000,0	2630	2809	Working Capital
4B	ID	E0	HK	E0	IDR	279.509.200.000,0	2630	2809	Working Capital
4B	ID	E0	HK	E0	IDR	350.000.000.000,0	2630	2809	Working Capital
4B	ID	E0	HK	E0	IDR	400.000.000.000,0	2630	2809	Working Capital
3C	CH	E0	ID	E0	USD	2.000.000,0	2495	2194	Modal
3C	GB	E0	ID	E0	USD	1.000.000,0	2580	2809	Working Capital

Figure 1.3 Example Data Transaction (LLD 1)
Sumber: DPKL, Bank Indonesia (2022) has been reprocessed.

Indicator Problem	Number	Root Causes
Internal Bank Indonesia	1	Recording of Services Transaction on Cash Basis
	2	Transaction Purpose (STT) is Complex
	3	Understanding of the Account Officer LLD Bank regarding the development of service transaction
	4	Manual Data Accuracy Check
Eksternal Bank Indonesia	5	Limited Information From Customer
	6	Routine movements of Frontliners of Reporting Banks
	7	The Lack of Training provided by Head Office of the reporting bank

Table 1.1 Root Causes Hypothesis

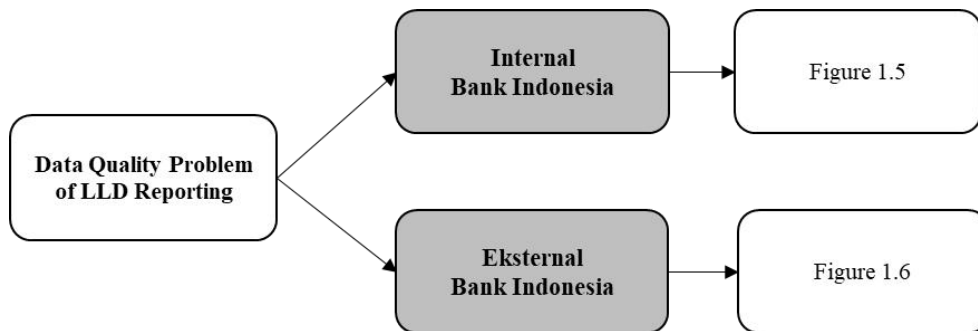Sumber: Interview results processed by the author (2023)

Figure 1.4 Issu Tree Diagram I
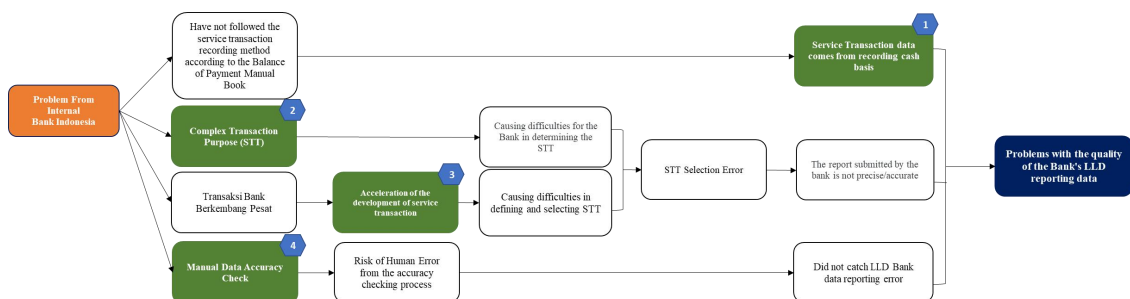Sumber: : Interview results processed by the author (2023)

Figure 1.5 Issu Tree Diagram II
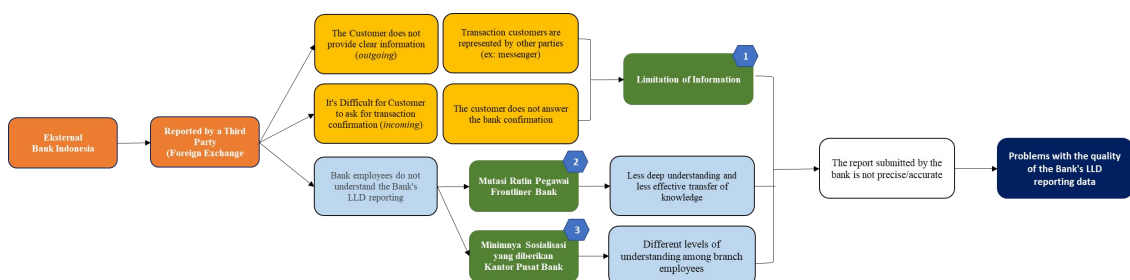Sumber: : Interview results processed by the author (2023)

Figure 1.6 Issu Tree Diagram III
Sumber: : Interview results processed by the author (2023)