TDDC: Timely Disclosure Documents Corpus

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Abstract
In this paper, we describe the details of the Timely Disclosure Documents Corpus (TDDC). TDDC was manually organized by aligning the sentences from past Japanese and English timely disclosure documents in PDF format published by companies listed on the Tokyo Stock Exchange. TDDC consists of approximately 1.4 million parallel sentences in Japanese and English. TDDC was used as the official dataset for the 6th Workshop on Asian Translation to encourage the advancement of machine translation.

Keywords: Parallel corpus, Machine translation, Asian language, Stock exchange, Investor Relations

1. Introduction
The Tokyo Stock Exchange (TSE) is one of the largest capital markets in the world, with over 3,600 companies listed as of the end of 2018. TSE–listed companies are required to disclose material information to the public in a timely manner. This information is written in timely disclosure documents and includes financial statements, corporate actions, and corporate governance policies. Moreover, the documents are essential for investment decisions and are disclosed on the TSE websites.

From the surveys by TSE, the proportion of overseas corporation ownership of Japanese listed company shares (based on market capitalization) has risen almost consistently since 1990 to currently around 30%. As of 2018, the proportion of share trading value coming from transactions by overseas investors is approximately 59%. Although tens of thousands of original Japanese documents are disclosed every year (i.e., over 79,000 documents in 2018), the availability of English disclosure documents is limited. Thus, there is a strong demand for machine translation on both listed companies and global investors since Japanese to English translation needs to be done in a timely manner.

However, it is difficult for TSE–listed companies to translate all their documents owing to the volume of information, limited resources of translators, and time constraints. The amount of text in timely disclosure documents tends to be large. In 2018, the total number of pages in all timely disclosure documents (over 79,000 documents disclosed by over 3,600 companies) exceeded 710,000; which means on average, a TSE–listed company is required to disclose over 197 pages each year. For TSE–listed companies, to translate these pages would take huge amounts of time and money. Moreover, there are not enough translators available for all timely disclosure documents because the demand for translation clusters in peak season. For example, in 2018, approximately 48% of TSE–listed companies disclosed annual earnings reports (over 38,000 pages) in the same week, from May 9th to 15th. Furthermore, most investors require TSE–listed companies to disclose both Japanese and English documents simultaneously. Consequently, it is not easy to meet the demand for the English translation of timely disclosure documents using manual translation only. The machine translation could therefore be a solution to these problems.

For current machine translation systems aimed at a specific field, a parallel corpus adapted to that field is regarded as an essential resource. There are already Japanese–English parallel corpora for training machine translation systems in fields such as patents (Utiyama and Isahara, 2007) and scientific papers (Nakazawa et al., 2016). However, thus far, there is no large-scale Japanese–English parallel corpus specifically aimed at the Investor Relations field.

The Timely Disclosure Documents Corpus (TDDC) consists of approximately 1.4 million Japanese–English sentence pairs that have been extracted from past timely disclosure documents and other documents. Timely disclosure documents contain important figures (e.g., sales, profits, and dates) and proper nouns (e.g., names of people, places, companies, businesses, and products). This information is essential for investors; thus, mistranslations need
to be avoided, and overall translation quality needs to be improved.

TDDC was prepared by Japan Exchange Group (JPX), which is an operator of securities exchanges including TSE. It was provided for research at the 6th Workshop on Asian Translation (WAT)\(^4\). During the 6th WAT, TDDC was free and available online only for research on natural language processing such as machine translation\(^5\). In this paper, we introduce details of TDDC and briefly explain the findings from the 6th WAT perspective.

2. Timely Disclosure Task
Timely disclosure task, which is one of the subtasks for the 6th WAT, aims to improve the Japanese to English translation of sentences extracted from timely disclosure documents to avoid mistranslations that would confuse investors. As terms on which investors focus, we define two groups: important figures and proper nouns. These terms cannot be accurately translated using typical Neural Machine Translation (NMT) systems because the NMT systems restrict the vocabulary size and consider rare words (e.g., names and numbers) as out-of-vocabulary words (Luong et al., 2015). The current NMT systems introduce the subword tokenization, which transfers rare words to the sequence of its constituent characters (Sennrich et al., 2016). However, the subword tokenization solves the problem only if a rare word can be translated as constitutive words. Thus, even using the subword tokenization, the NMT systems often are often unable to translate neither numbers with many digits nor constitutive proper nouns. The following sections will explain the summary of the timely disclosure documents and their details.

2.1. Timely Disclosure Documents
Timely disclosure documents are disclosed in PDF format on the TSE websites. There are mainly three categories of timely disclosure documents: performance results, corporate governance reports, and documents that describe material facts pertaining to business or other matters of listed companies. The material facts get defined in the Japanese law (Article 166 of the Financial Instruments and Exchange Act).

TSE–listed companies are usually required to disclose their performance results as “決算短信” (Kessan tanshin, Earnings reports) for four times a year and corporate governance reports, which describe their status of corporate governance at least once a year. These periodic or annual documents tend to contain many common words and sentences for each company because companies tend to write new documents by referring to their past documents. Meanwhile documents that describe material facts are disclosed as required, not periodically.

2.2. Important Figures
We define important figures as numbers that have financial meaning (e.g., not page numbers and item numbers) such

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\(^4\)http://lotus.kuee.kyoto-u.ac.jp/WAT/WAT2019/index.html

\(^5\)http://lotus.kuee.kyoto-u.ac.jp/WAT/Timely_Disclosure_Documents_Corpus/

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| Table 1: Examples of amounts |
|-------------------------------|
| Japanese | English |
| 224,812 円 | 224,812 yen |
| 10,537 百万円 | 10,537 million yen |
| 1,283,929 千円 | 1,283,929 thousand yen |

| Table 2: Examples of dates |
|----------------------------|
| Japanese | English | Unbalanced Translation |
| 平成 30 年 6 月 26 日 | June 26, 2018 |
| 2018年度第1四半期 | the first quarter of fiscal 2018 |
| 2019年度第3四半期 | Q3 FY2018 |
| 4月1日 | April 1, 2018 |
| 第3四半期合計期間 | consolidated cumulative third quarter of this fiscal year |

Examples of amounts include sales, revenue, and numbers of sales. The numbers in English increase by thousands; however, the Japanese numerals group numbers by 10,000. There are various patterns of units of amounts in Japanese timely disclosure documents, particularly. The following patterns “1 億 5 千万円” (1 \( \times 10^8 + 5 \times 10^7 \) yen), “1 億 5000 万円” (1 \( \times 10^8 + 5 \times 10^5 \) yen), “1 億 50 百万円” (1 \( \times 10^8 + 50 \times 10^5 \) yen), and “150 百万円” (150 \( \times 10^4 \) yen) indicate “150 million yen”. Examples of amounts are shown in Table 1.

Examples of dates include document issue dates, accounting period, and fiscal year. The imperial era name (or Japanese era name), such as “平成” (Heisei) and “令和” (Reiwa) are widely used in Japanese documents for counting years, instead of Anno Domini (AD). There are cases where some companies omit information on dates in Japanese but provide them in English. For example, although “前期” (prior period) was written in a Japanese document, an English document described it as “fiscal year 2017”. In Japanese timely disclosure documents, there are many variable prefixes for dates such as “本” (this), “当” (this), “次” (next), and “前” (previous, last). Examples of dates are presented in Table 2.

For performing the timely disclosure task, context-based accurate translation is not necessary (e.g., omissions of words in Japanese sentences and abbreviated numbers). However, these unbalanced sentences cause poor corpus quality.

2.3. Proper Nouns
We define proper nouns as rare words that are found only in documents from one company such as names of people, company names, names of places, and product names. This definition limits its original meaning and excludes technical terms such as accounting and legal terms. These terms can be found not only in the documents from one company but also in the documents from other companies. For investors, it is important to clearly grasp the subjects and objects in sentences, which should not be misplaced or translated in other proper nouns.

Moreover, in timely disclosure documents, there are pairs of sentences for which the information in Japanese and En-
lish are not equivalent owing to the differences in proper nouns between Japanese and English sentences: omission of subjects or objects and addition of proper nouns. There are cases where some companies omit the subject and object in Japanese but supplement proper nouns in English. In other cases, in Japanese timely disclosure documents, some companies frequently use pronouns; however, in English, those pronouns are replaced with proper nouns. Similar to dates described in Section 2.2, for this task, it is not necessary to achieve accurate translation based on the context (e.g., translation of Japanese pronoun to proper nouns). Table 3 shows examples of subject or object omissions and proper nouns additions.

3. Construction of the Corpus

The construction process of TDDC consists of the following steps: (1) gathering source documents, (2) aligning documents and sentences, and (3) preprocessing sentences.

3.1. Source Documents

The source documents of TDDC are documents that satisfied the following conditions:

- disclosed from January 1, 2016 to June 30, 2018
- written by TSE–listed companies or Real Estate Investment Trusts (REITs)
- disclosed in both Japanese and English, and
- not encrypted or rasterized (i.e., sentences can be extracted).

The source documents include documents that were disclosed daily (not timely), such as Corporate Governance Reports, which are also essential for investors.

3.2. Aligning Documents and Sentences

The pairs of documents and pairs of sentences were manually aligned through crowdsourcing. The main procedure is as follows: (a) A worker picks an English document from the documents which no one has picked yet. (b) The worker finds the corresponding Japanese document. (c) The worker extracts English sentences from top to bottom of the English documents and sees each of the similar Japanese sentences. (d) A Checker examines the alignment results. Thus, the sentences of one document are aligned by only one worker, and there is no automatic alignment generated before the manual alignment.

Sentences that were difficult to align were excluded (e.g., translations with notes in English), and not all sentences in each timely disclosure document were included in TDDC. Although checkers carefully examined the alignment results, there may have been the following errors: character corruption, alignment errors, and not extracted characters at the beginning or end of sentences.

3.3. Preprocessing

The aligned sentences underwent five preprocessing steps to remove noises (i.e., character corruption, control characters, and extra spaces).

- Replacing characters Most TSE–listed companies made timely disclosure documents using Windows OS computers because this is the recommended environment of TSE systems. Although files created in Japanese Windows OS are mainly encoded with CP932 (Code Page 932), timely disclosure documents frequently contained characters that are not defined in CP932. Therefore, some specific characters are replaced with other characters described in CP932.

- Unicode normalization There are two ways of expressing alphanumeric characters in Japanese sentences on computers: full-width and half-width. To normalize characters (including the abovementioned characters), the sentences are normalized with NFKC (Normalization Form Compatibility Composition)⁶, with the following exceptions. Numbers enclosed within a circle (“①”–“⑫”; U+2460–U+2473), Two dot leaders (“・”; U+2025), and Horizontal ellipsis (“…”; U+2026). The words in these exceptions are often written in timely disclosure documents, and each of them and their normalized characters will have distinct meanings. For example, numbers enclosed within a circle will be normalized with NFKC into integers, and both these numbers will be used in the original document as distinct item numbers.

- Deleting control characters Sentences extracted from PDF documents sometimes contain control characters. Therefore, control characters are removed such as the characters whose Unicode Character Categories are “Cc,” “Cf,” “Cn,” or “Co.”

- Deleting extra spaces Extra spaces in the sentences are deleted such as spaces at the beginning and end of sentences, and more than one space.

- Deleting non–Japanese–English pairs To make TDDC contain Japanese–English pairs, non–Japanese–English pairs are deleted such as an English sentences that contains Japanese characters and Japanese sentences that does not contain Japanese characters.

4. Dataset

TDDC is partitioned into the training (Train), development (Dev), development–test (DevTest), and test (Test) data. The sets of source documents used as training, development, development–test, and test data are independent of each other. Furthermore, each data set of the development, development–test, and test is further split into two sets of data. Sentences that end with a Japanese period (“.”; U+3002) are classified as Texts, which have various sentences, and others are classified as Items, which contain many duplicates and similar expressions.

4.1. Data Format

TDDC consists of Japanese–English sentence pairs, document hashes, and sentence hashes. A document hash is a hash of the Document ID (DID), which is a unique identifier of the source document. A sentence hash is a hash of the DID and Sentence ID (SID), which is a unique identifier of the sentence in each source document. Pairs of

⁶http://www.unicode.org/reports/tr15/, as of Nov. 2019
A challenging issue for the general NMT systems is the difficulty of the timely disclosure task. We conducted an analysis of TDDC.

Table 5 shows the statistics of TDDC. To understand the difficulty of the timely disclosure task, we conducted an analysis of TDDC.

A compelling issue for the general NMT systems is the long sentence processing (Bahdanau et al., 2014). Approximately 23% of sentences in Train-2016-to-2017 are long (i.e., the number of words is over 50). Figure 1 shows the distribution of the number of English words in the sentences of Train-2016-to-2017.

Table 7 gives the distribution of source documents in Train-2016-to-2017. Similar to Section 3.1, TDDC consists of sentences from timely disclosure documents that are disclosed both in Japanese and English; thus the publishing companies are biased. The number of the publishing TSE-listed companies in Train-2016-to-2017 is 590, although 3,602 companies are listed on TSE as of the end of 2017.

6. Timely Disclosure Task at the 6th Workshop on Asian Translation

TDDC was provided for the 6th WAT, which is an open evaluation campaign that focuses on Asian languages. The participants of the timely disclosure task can submit the results of Texts and/or Items. During the 6th WAT, the translation performance of the results underwent automatic and human evaluations (Nakazawa et al., 2019). As automatic evaluation, the following three metrics were used: BLEU (Papineni et al., 2002), RIBES (Isozaki et al., 2010) and AMFM (Banchs et al., 2015). For human evaluation, two types of evaluations were used: pairwise crowdsourcing evaluation (Nakazawa et al., 2016) and Japan Patent Office (JPO) adequacy evaluation. In addition to these official evaluations during the 6th WAT, to focus on the timely disclosure task, we particularly evaluated the results of JPO adequacy evaluation.

6.1. JPO Adequacy Evaluation

The JPO adequacy evaluation was performed by translation experts with a quality evaluation criterion for translated patent documents that was decided by the JPO. Table 8 shows the JPO adequacy criterion from 5 to 1. The evaluation was performed subjectively. “Important information” represents the technical factors and their relationships. The degree of importance of each element was also evaluated. The percentages in each grade are rough indications for the transmission degree of the source sentence meanings. The detailed criterion is described in the JPO document (in Japanese English).
We hereby announce that the consolidated earnings forecast and year-end dividend forecast for the fiscal year ended March 31, 2018 released on October 30, 2017 have been revisied as follows.

As a result, the year-end dividend per share for the fiscal year ended March 31, 2018 will be Y 43 (ordinary dividend of Y 33 plus commemorative dividend of Y 10).

Table 8: The JPO adequacy criterion

| Score | Meaning                                      |
|-------|----------------------------------------------|
| 5     | All important information is transmitted correctly (100%) |
| 4     | Almost all important information is transmitted correctly (80%–) |
| 3     | More than half of important information is transmitted correctly (50%–) |
| 2     | Some of important information is transmitted correctly (20%–) |
| 1     | Almost all important information is NOT transmitted correctly (< 20%) |

Table 9: Results of evaluation of important figures and proper nouns (%)

|       | ntt  | NICT-2 | sarah | geoduck |
|-------|------|--------|-------|---------|
| Proper | Texts (N=50) | 68.0  | 68.0  | 72.0  | 76.0  |
| Nouns  | Items (N=50)  | 74.0  | 68.0  | 74.0  | -     |
| Important | Texts (N=92) | 93.5  | 93.5  | 92.4  | 68.5  |
| Figures | Items (N=83)  | 97.6  | 96.4  | 94.0  | -     |

0 or 1, where 1 means that the words (important figures or proper nouns) are correctly translated.

6.3. Participants

During the 6th WAT, 4 teams participated in the Japanese–English timely disclosure documents task (Nakazawa et al., 2019), Morishita et al. as ntt (Morishita et al., 2019), Imamura and Sumita as NICT-2 (Imamura and Sumita, 2019), and Susanto et al. as sarah (Susanto et al., 2019) used NMT without other resources. Eriguchi et al. as geoduck (Eriguchi et al., 2019) used translation memory and NMT with 1 million Japanese–English Wikipedia parallel corpus provided by Asai et al. (Asai et al., 2018) as an additional training resource.

6.4. Evaluation Results

Figures 2 and 3 denote the official results of the timely disclosure task (Nakazawa et al., 2019). Table 9 shows the evaluation results of the sentences containing important figures or proper nouns. Table 10 shows the sample results of
Figure 2: Official evaluation results of Items (tddc-itm-ja-en)

Figure 3: Official evaluation results of Texts (tddc-txt-ja-en)

participants.

In the results, all systems achieved approximately 4 points according to the JPO adequacy evaluation scores for both Items and Texts, and all evaluators rated over 70% of all pairs as 4 or 5. We examined these results and determined that most of these high-rated pairs consist of typical terms and sentences from timely disclosure documents, including long sentences.

The sentences of Examples 1, 2, and 3 in Table 10 include important figures or proper nouns; in addition, the source sentences in Example 3 are long, and they were correctly translated. Moreover, the source sentences in Example 1 and 3 contain complex numbers with Japanese numerals; however, they were correctly translated by the systems. It is assumed that these sentences are typical in timely disclosure documents, and there are sufficient sentences for training models.

Despite these scores, however, Table 9 shows that there are mistranslations of important figures and proper nouns.

6.4.1. Mistranslations

We determined that there were four patterns of mistranslations in these results: uncommon expressions, appearance of unrelated proper nouns, incorrect modifiers or determiners, and sentences that contained interpreted numbers. Table 10 shows various error types, which are analyzed below:

Uncommon sentences and words used in timely disclosure documents tend to be mistranslated. The structure of the source sentences in Example 4 seemed to be uncommon in timely disclosure documents, and some sentences were scored low. In Example 4, some figures in the sample results were mistranslated and modified with irrelevant date. Moreover, in Example 5, names of people were rare in TDDC, and they were mistranslated. The abovementioned information implies that the translations of uncommon sentences are considerably affected by sentences in the training data that are similar but have different meaning.

Some systems tended to translate sentences without subjects into sentences with incorrect subjects. As mentioned in Sections 2.2, Japanese sentences frequently omit subjects and objects that would normally be included in English. However, source sentences in Examples 6 and 7 that included “当社” (The Company) were sometimes translated to unrelated company names. Similarly, in Example 8, despite the lack of the subject, the translated sentence contained a specific personal name. To achieve accurate translation by machine translation systems, awareness of the context is required, otherwise unnatural or passive sentences are output. It is assumed that there were the same or similar sentences in the training data, and the subjects in English sentences contained proper nouns.

There are some incorrect modifiers or determiners in these results. As mentioned Sections 2.1, in Japanese timely disclosure documents, there are many variable prefixes for dates. Some systems translated sentences containing these words with an incorrect year. For example, the source sen-
In this study, we introduced TDDC, which is a large-size parallel corpus of timely disclosure documents. The purpose of TDDC is to contribute to the improvement in machine translation of sentences in these documents. However, we predict that TDDC could be diverted for use in benchmarks for Named–Entity Recognition because the sentences in TDDC have particular useful characteristics with respect to proper nouns and figures. The results of the 6th WAT suggest that most sentences that are typical in TDDC and do not depend on context are translated correctly. However, there are mistranslations in sentences that contain words that are not present in TDDC or whose meaning changes depending on the context. Further consideration is needed to improve these translations, such as an expansion of language resources, context-aware machine translation systems, and suitable evaluation criteria for the timely disclosure task. TSE–listed companies disclose many timely disclosure documents every year. We should consider using the rich source of information in these documents to expand language resources in the Investor Relations field.

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Table 10: Example of translation results (values given in parentheses indicate the average values of the JPO adequacy evaluations obtained using two evaluators)

| Ex. | Sentences |
|-----|-----------|
| 1 Source | 取収益の基本相当額の額面は、年間 1 億 41 億円 うち、社外経済は 3,000 万円以内としております。 |
| Reference | The total amount of basic remuneration for Directors is set at 1.0 billion yen per year (of which, up to 50 million yen for Outside Directors). |
| Result (5.0) | The total amount of basic remuneration for Directors is 1.0 billion yen per year (including outside directors of 50 million yen per year). |
| 2 Source | 第三四期が 2016 年 6 月に行われた |
| Reference | Submitted by Daiichi Sankyo in June 2016 |
| Result (5.0) | Submitted by Daiichi Sankyo in June 2016 |
| Result (5.0) | Submitted by Daiichi Sankyo in June 2016 |
| 3 Source | この結果、保有契約の平均保険料は 1 万 79 万円となり、保有契約保険料はもとより 2,028,255 百万円となりました。 |
| Reference | As positive factors, profit before income taxes rose 1.231 million yen, and the increase in other assets and the increase in notes and accounts payable - trade totalled 679 million yen and 607 million yen, respectively. As a negative factor, cash flow from increase and decrease in net defined benefit liability fell 1,342 million yen. |
| Result (5.0) | This was primarily due to the result of increases in income before income taxes of 1,231 million yen, cash flows from changes in other assets of 679 million yen and cash flows from an increase or decrease in notes and accounts payable-trade of 607 million yen, while there was a decrease in net defined benefit liability of 1,342 million yen. |
| 4 Source | この結果、保有契約の平均保険料は 1 万 79 万円となり、保有契約保険料はもとより 2,028,255 百万円となりました。 |
| Reference | Accordingly, annualized premium*1 of policies-in-force was 10,796 million yen. The number of policies-in-force resulted in a total of 255,618, and sum insured of policies-in-force stands at 2,028,255 million yen. |
| Result (4.0) | Accordingly, annualized premium*1 of policies-in-force was 10,796 million yen. The number of policies-in-force resulted in a total of 255,618, and sum insured of policies-in-force stands at 2,028,255 million yen. |
| Result (3.0) | Accordingly, annualized premium*1 of policies-in-force was 10,210 million yen. The number of policies-in-force resulted in a total of 242,379, and sum insured of policies-in-force stands at 1,976,419 million yen. |
| 5 Source | 第三四期終了日および本報発行日をもとに会計年度のデータを用いて計算しました。 |
| Reference | The appointment of Tetsuya Kitaka and Munehiro Uryu are based on the premise of an approval from the authority. |
| Result (4.0) | *1 Based on the approval of the authorities, Kengo Sakurada and Kengo Oshiro will assume the office of Director. |
| Result (4.0) | *1 The appointment of Tetsuya Kitaka and Mr. Uryu Uryu is subject to the approval of the regulatory authorities. |
| 6 Source | 筆者は、日本の特許に対する期待値を反映する重要な指標の一つと位置づけております。 |
| Reference | The Company recognizes the return of profit to its shareholders as a key management priority. |
| Result (4.5) | Kyowa Hakko Kirin regards the return of profits to its shareholders as one of its key management priorities. |
| Result (4.5) | FANCL considers the distribution of profit to shareholders to be an important management issue. |
| 7 Source | 構築期に、平成 30 年 7 月 31 日を基準日とする実測損益算定数について、以下の内容で内訳を見ております。 |
| Reference | The Company has announced that at a meeting held today, the Board of Directors passed a resolution to pay dividends from surplus (year-end dividend) with a record date of March 31, 2018. |
| Result (4.5) | The Company has announced that at a meeting held today, the Board of Directors passed a resolution to pay dividends from surplus (year-end dividend) with a record date of March 31, 2018. |
| Result (4.0) | The Company has announced that at a meeting held today, the Board of Directors passed a resolution to pay dividends from surplus (year-end dividend) with a record date of March 31, 2018. |
| 8 Source | お客さまの観点でのマーケティングに携わってきたローバル企業の経営のトップとして、経営者・経営に近い経験による深い見識を有しております。 |
| Reference | He has extensive experience and deep insight into management as a top management of a global company which is proficient at marketing from the customers’ perspectives. |
| Result (4.5) | Mr. Itō has extensive experience and deep insight into management as a top management of a global company which is proficient at marketing from the customers’ perspectives. |
| Result (4.5) | Mr. Itō has extensive experience and deep insight into management as a top management of a global company which is proficient at marketing from the customers’ perspectives. |
| 9 Source | 構築期の実績により、平成 30 年度の管理法人期首においては 229,856 百万円に、基準日を含めた財務年度においては 97,228 百万円を減じました。 |
| Reference | The total assets at the end of third quarter of this fiscal year were 229,856 million yen, a decrease of 97,228 million yen versus the end of the previous fiscal year. |
| Result (4.5) | The total assets at the end of the third quarter of FY 2016 were 229,856 million yen, a decrease of 97,228 million yen versus the end of FY 2015. |
| Result (4.5) | The total assets at the end of the third quarter of FY 2017 were 229,856 million yen, a decrease of 97,228 million yen from the end of FY 2016. |
| 10 Source | うち、主力分野の BtoB 事業の伸長率は 101.7% で、LOHACO の伸長率は 99.4% となりました。 |
| Reference | Of the total, non-consolidated net sales of mainstay B-to-B business grew 1.7% on a year-on-year basis and those of LOHACO declined 0.6%. |
| Result (2.5) | Of the total, non-consolidated net sales of mainstay B-to-B business grew 1.7% on a year-on-year basis and those of LOHACO declined 0.6%. |
| Result (1.0) | Of the total, non-consolidated net sales of mainstay B-to-B business grew 5.3% on a year-on-year basis and those of LOHACO declined 7.1%. |

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