ANALYST NET

GCC Management™ Analysis Report

# Vega corporation Co., Ltd.

TSE Growth Market Security Code 3542 March 30, 2023

# 3.8x upside potential based on GCC Management™ analysis

## Aiming to stabilize profit/loss while capturing the JPY4.3 trillion market. Further upside if the exchange rate improves

This report analyzes corporate value based on the "GCC Management™" framework developed by J-Phoenix Research Corporation ("JPR"), which emphasizes three elements: Growth (sales growth), Connection (strategic connection of all stakeholders, leading to improved stability), and Confidence (enhanced trust and lowered business risks).

### Infinite Possibilities for EC: Helping Consumers Increase LTV through EC

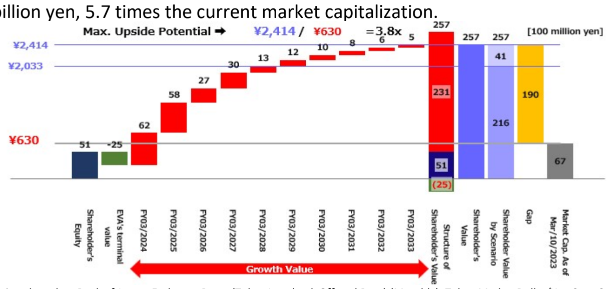
Vega is still small in the furniture and interior industry as a whole, with sales of about 17 billion yen, but it has had the foresight to start the now commonplace practice of purchasing furniture and interior goods through EC since its founding in 2004. What is revolutionary about Vega is that it is not simply an e-commerce company that delivers goods or a furniture manufacturer, but rather it explores the needs of consumers and matches them with the best furniture to meet their needs. If there is nothing that meets their needs, they create their own products and services, and continue to take on the challenge of expanding the possibilities of EC to help consumers increase their LTV.

### Aiming for expansion in a 4.3 trillion yen market while ensuring stability in terms of profit and loss

In the furniture and interior decoration sector, the EC conversion rate is about 10%, including related markets, so there is still much room for expansion. To increase market share, the company will work to strengthen its ability to attract customers and product lineups and expand customer contact points to send customers to EC through measures such as sales of other companies' brands, wholesale, and strengthening real stores. These efforts will also improve customer convenience through the duplication of online/offline channels.On the other hand, while manufacturing its own products was advantageous in terms of meeting customer needs, the company suffered in terms of profit and loss due to the weak yen. Although the company had great room for growth and wanted to keep its foot on the gas pedal to take advantage of opportunities, President Ukishiro, reflecting on the backlash from the "stay-at-home" demand, changed the company's management policy from taking as much growth as possible to securing profits. This is expected to transform the company into a company that will not only grow, but also provide peace of mind to

### Maximum upside 3.8x, 5.5x at an estimated exchange rate of 125 yen

Shareholder value was estimated using the "excess profit method" (see "Appendix 2") according to the GCC Management™ framework. As a result, assuming that the concept of the value creation process is implemented and realized, if 10 years of growth value is factored in, shareholder value would be 25.5 billion yen. This was estimated to be approximately 4.0 times the current market capitalization (see "Investment Summary" in the main text). The exchange rate assumption of 130-135 yen for the next 10 years is used[1]. If the exchange rate were to fall to 120-125 yen, shareholder value would be estimated at 36.4 billion yen, 5.7 times the current market capitalization.




1: Assumptions based on Bank of Japan, Exchange Rates (Tokyo Interbank Offered Rate) (Monthly), Tokyo Market Dollar/Yen Spot Central Rate/Monthly Average, https://www.stat-search.boj.or.jp/ssi/mtshtml/fm08_m_1.html.

### Basic report

Written and Edited by
J-Phoenix Research Inc. Yosuke Kashiwao

| Corporate Profile | |
|---|---|
| Headquarters | Fukuoka-city, Fukuoka Prefecture |
| Representative | Tomokazu Ukishiro |
| Established | July 21, 2004 |
| Capital | JPY 1,028.21 million |
| Listed | June, 2016 |
| URL | https://www.vega-c.com/ |
| Industry | Retail industry |

| Key Indicators As of March 27, 2023 | |
|---|---|
| Stock price | JPY614 |
| Highest in 52 weeks | JPY962 |
| Lowest in 52 weeks | JPY454 |
| Outstanding Shares | 10,635,400stocks |
| Trading Units | 100stocks |
| Market Capitalization | JPY6,530million |
| Prospective Dividend | JPY10 |
| Estimated EPS | JPY3.95～9.59 |
| Estimated PER | 64~155times |
| Actual BPS (Dec 2022) | JPY487.57 |
| Actual PBR | 1.23times |

| Perfomance Trends | Sales (JPY 1 mil.) | YoY % | Operating income (JPY 1 mil.) | YoY % | Ordinary income (JPY 1 mil.) | YoY % | Net income (JPY 1 mil.) | YoY % | EPS (JPY) | Stock price High price (JPY) | Stock price Low price (JPY) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Results for FY 3, 2020 | 13,570 | 1.9% | 116 | returning to profit | 146 | returning to profit | 40 | returning to profit | 3.94 | 830 | 416 |
| Results for FY 3, 2021 | 19,313 | 42.3% | 1,824 | 1472.4% | 1,851 | 1167.8% | 1,159 | 2760.8% | 110.99 | 3,890 | 399 |
| Results for FY 3, 2022 | 16,833 | -12.8% | 596 | -67.3% | 621 | -66.5% | 383 | -67.0% | 36.43 | 2,030 | 589 |
| Results for FY 3, 2022 2Q | 12,456 | -12.6% | 449 | -68.1% | 472 | -66.9% | 309 | -64.4% | 8.18 | 2,030 | 940 |
| Results for FY 3, 2023 2Q | 12,468 | 0.1% | 215 | -52.1% | 235 | -50.2% | 25 | -91.8% | -3.27 | 962 | 461 |
| Results for FY 3, 2023 | 16800 ~17300 | △0.2 ～2.8 | 250 ～350 | △58.1% ～△41.3% | 270 ～370 | △56.5% ～△40.4% | 42 ~102 | △89.3% ～△73.3% | 3.95 ～9.59 | - | - |

# 1. Investment Summary

## Shareholder value analysis

Maximum upside to market capitalization estimated at 3.8x

### Estimation using the excess profit method

#### Maximum upside of 3.8x depending on realization of growth scenario

JPR estimated shareholder value using the "excess profit method" (see "Appendix 2") based on the GCC Management™ framework, taking into account the future prospects regarding Vega's business development. The exchange rate assumption of 130-135 yen for 10 years was used. The following chart visualizes the framework of the qualitative and quantitative story and the results of the estimation. The assumptions are explained on the next page and beyond.

The estimates based on the assumption of an exchange rate of 120-125 yen are shown on page 12 and beyond, which yields an upside of 5.5x.

JPR's foreign exchange rate assumptions are based on historical analysis and future projections using average exchange rates based on previously disclosed information. Please note that there is a risk that the actual assumptions may change due to currency hedging and other factors, and that the shareholder value estimated by JPR may change accordingly.

**Shareholder Value Analysis**

**Qualitative Story Outline**

Growth： Expansion of market share and stable growth in the 4.3 trillion yen market

Connection: Reach new customers through online/offline integration

Confidence: Stabilization of profit/loss for stable growth is key

▼

**Quantitative Story Framework**

Market capitalization: 6.7

Value Gap

Maximum upside to market capitalization ＝ 3.8times

Shareholder value reflecting a 10-year growth scenario to the maximum extent possible[1].

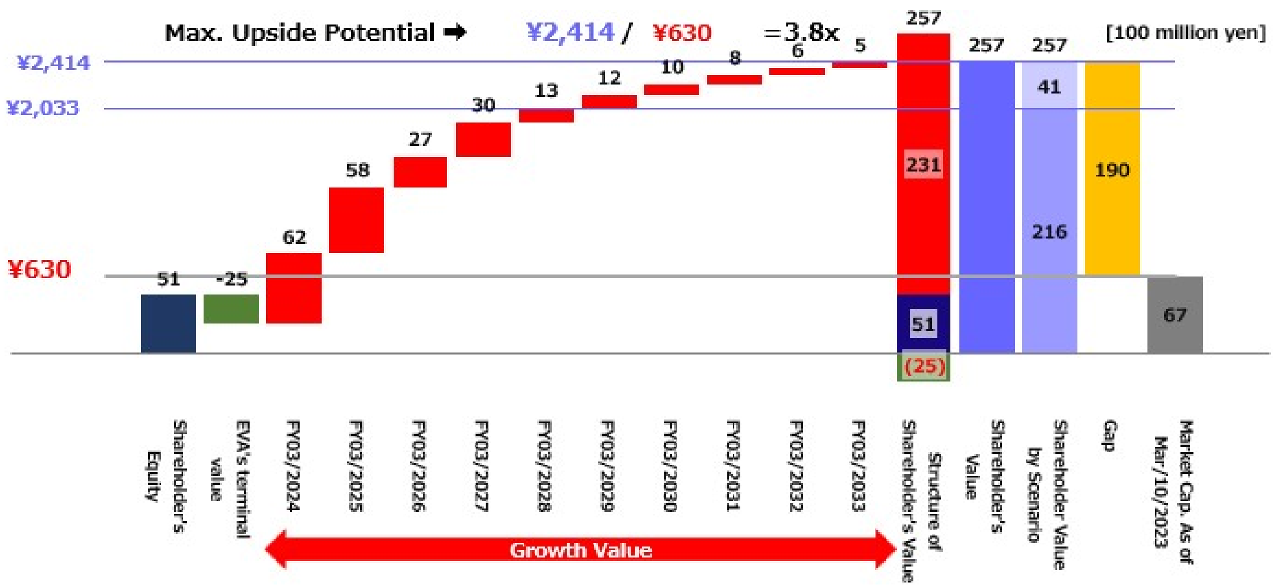
Shareholders' equity 51 + Excess profit value -25 + Growth value 231= 25.7billion yen

| Shareholders' equity | Excess profit value | Growth value |
|---|---|---|
| 5.1 | -2.5 | 23.1 |

Soure: JPR

1: Fractions do notnmatch due to rouding

## Excess value valuation of Quantum Solutions.




[Source] JPR

## Shareholder Value Structure and Value Gap Analysis Using the Excess Profit Method (Details)

| [¥100mn] | Current Year 2023.03 | 1 year later 2024.03 | 2 years later 2025.03 | 3 years later 2026.03 | 4 years later 2027.03 | 5 years later 2028.03 | 6 years later 2029.03 | 7 years later 2030.03 | 8 years later 2031.03 | 9 years later 2032.03 | 10 years later 2033.03 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sales | 171 | 184 | 203 | 223 | 245 | 270 | 294 | 315 | 333 | 349 | 36 |
| Operating income | 3.0 | 9.3 | 16.3 | 20.1 | 24.6 | 27.0 | 29.5 | 31.6 | 33.4 | 34.9 | 36. |
| Operating margin | 1.8% | 5.0% | 8.0% | 9.0% | 10.0% | 10.0% | 10.0% | 10.0% | 10.0% | 10.0% | 10.0 |
| Sales growth rate | 1.3% | 8.0% | 10.0% | 10.0% | 10.0% | 10.0% | 9.0% | 7.2% | 5.8% | 4.6% | 3.7 |
| NOPAT margin | 1.2% | 3.5% | 5.5% | 6.2% | 6.9% | 6.9% | 6.9% | 6.9% | 6.9% | 6.9% | 6.9 |
| Invested capital turnover ratio | 32.6% | 29.2% | 29.2% | 29.2% | 29.3% | 29.3% | 29.3% | 29.4% | 29.4% | 29.4% | 29.4 |
| WACC | 6.8% | 6.8% | 6.8% | 6.8% | 6.8% | 6.8% | 6.8% | 6.8% | 6.8% | 6.8% | 6.8 |
| ROIC = NOPAT margin ÷ invested capital net sales ratio | 3.7% | 11.9% | 19.0% | 21.4% | 23.7% | 23.6% | 23.6% | 23.6% | 23.6% | 23.6% | 23.6 |
| ROIC / WACC (value created with the original hand of 1 y | ¥0.6 | ¥1.8 | ¥2.8 | ¥3.2 | ¥3.5 | ¥3.5 | ¥3.5 | ¥3.5 | ¥3.5 | ¥3.5 | ¥3.5 |
| NOPAT | 2.07 | 6.40 | 11.24 | 13.90 | 16.99 | 18.68 | 20.36 | 21.83 | 23.09 | 24.15 | 25.0 |
| Invested capital × WACC | 3.76 | 3.64 | 4.00 | 4.40 | 4.86 | 5.34 | 5.82 | 6.26 | 6.62 | 6.93 | 7.1 |
| EVA | -1.68 | 2.76 | 7.2356 | 9.50 | 12.13 | 13.34 | 14.54 | 15.56 | 16.46 | 17.22 | 17.8 |
| EVA = NOPAT - invested capital × WACC | -1.68 | 2.76 | 7.24 | 9.50 | 12.13 | 13.34 | 14.54 | 15.56 | 16.46 | 17.22 | 17.8 |
| Value created in each year | -25 | 66 | 66 | 33 | 39 | 18 | 18 | 15 | 13 | 11 | |
| Discount Rate | 100% | 94% | 88% | 82% | 77% | 72% | 68% | 63% | 59% | 55% | 52 |
| **Present value of EVA** | -24.900 | 62 | 58 | 27 | 30 | 13 | 12 | 10 | 8 | 6 | |
| **Invested capital ① Origin** | 56 | | | | | | | | | | |
| **Over profit value (Permanent value of EVA of this ter** | -25 | | | | | | | | | | |
| **Growth value (Present value of increase in EVA) ③** | 231 | | | | | | | | | | |
| **Non-business asset value ④** | 1 | | | | | | | | | | |
| **Corporate value = ① + ② + ③ + ④** | 262 | | | | | | | | | | |
| **Interest-bearing debt, etc.** | -5 | | | | | | | | | | |
| **Shareholder value** | 257 | | | | | | | | | | |

[Source] JPR

## Three qualitative and quantitative information assumptions set for estimating shareholder value*1

## Growth : Expansion of market share and stable growth in the 4.3 trillion yen market

### Values / Worldview

**Infinite Possibilities for EC**

Vega, founded in the early days of EC as an Internet specialist, sees EC not only as a device for delivering goods, but also as a device for creating new value for consumers, with unlimited possibilities. At the time of its founding, the furniture and interior design field lacked both affordability and design. Therefore, he took it upon himself to open up a new field of furniture and interior design that consumers would want through EC.

### Value provided/growth potential

**Furniture, interior, etc. market is 4.3 trillion yen**

The market size is 4.3 trillion yen if related markets such as home appliances and sundries are included in furniture and interior goods. However, the ratio of e-commerce is about 10%. The recognition rate of Vega is also still low at 15.4%.

Vega is aiming for growth in three directions: (1) increasing the EC rate in its mainstay furniture domain, (2) expanding categories and increasing the EC rate in related domains, and (3) expanding into real stores and sending customers to EC.

### Sales

**Estimated at 8% CAGR**

2023.3 **17.1** billion yen ▶ 2033.3 **36.1** billion yen

Calculations are based on the assumption of 8% growth for two years including the current fiscal year and 10% growth thereafter until FY2028, after which the growth rate is assumed to decrease.

### Growth Value

**23.1** billion yen

## Connection : Online/Offline Integration to attract new customers

### Strategy

**Creating a system that contributes to LTV improvement**

Vega's goal is to answer the following questions: What is the mechanism that makes customers happy? What products are attractive to customers? What is an attractive store for customers? What is the UI/UX for customers? These are the initiatives that contribute to improving the LTV of consumers. Vega aims to provide more than just furniture and interior, but also to collect and analyze the needs of consumers in order to optimally match them with the right products.

### Business Model

**Enhance customer attraction, product assortment, and services**

To expand its share of the furniture, interior and related markets, Vega will go beyond online and expand offline. Vega has announced a series of new measures, including sales of other companies' brands, wholesale sales, and real stores, but the objective is to send customers to the main e-commerce site. The advantages of offline will also be utilized to develop new services at OMO that are integrated with online.

### ROIC

**Expected to improve by 20.1 percentage points**

2023.3 **3.4** % ▶ 2033.3 **23.5** %

Assuming the same ratio of invested capital to net sales as the current situation, improvement in operating income will improve the ratio

### Exceeded profit

**-3.0** billion yen

## Confidence : Stabilization of profit and loss for stable growth is the key

### Financial Sustainability

**To secure stable profit and loss**

Although the current profit-and-loss is struggling due to a rebound from significant growth in demand for stay-at-home in 2020 and high cost of sales due to the weak yen, Vega is expected to continue to grow by 10% or more, including an increase in the percentage of the furniture and interior market converted to e-commerce. In this environment, President Ukishiro has made it clear that he is focusing on profit-and-loss with constant growth, and more than stable growth is expected, with an operating margin of 10% in the future, and further upside depending on exchange rates.

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### Contribution to Social Sustainability

**Contribution to LTV of consumers**

As an IT company, Vega's starting point is not manufacturing, but rather the needs of consumers. In order to realize these needs, Vega is involved in the development and manufacturing of its own products and services. In other words, in addition to creating new value, Vega also creates its own mechanisms for delivering that value and continues to improve its operations through a cycle of continuous improvement. This cycle is expected to continue to create products and services that contribute to increasing LTV improvement of consumers.

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### WACC

**Maintaining the status quo**

**6.8** %

Currently, the financial situation is relatively unstable. On the other hand, the business and its future potential will contribute greatly to the sustainability of society.

### Shareholders' equity

**5.1** billion yen

# 2. Company Overviews

## Company Profile

| | |
|---|---|
| Name | Vega corporation Co.,Ltd. |
| Year Established | 21-Jul-2004 |
| Representative | Tomokazu Ukishiro |
| Head Office Location | Hakata Gion-Center-Place 4F, 7-20 Gion-machi, Hakata-ku, Fukuoka-city, Fukuoka |
| Capital stock | 1,028.21 million yen |
| Number of Employees | 243 people (Present on September 30, 22) |
| Fiscal Year End | March |
| Business | Furniture/Interior Products EC, International EC Platform operation etc. |
| Date of Listing | 28-Jun-2016 |
| Stock Exchange Listing | Tokyo Stock Exchange Growth [Securities Code: 3542] |

Source: Compiled by JPR based on company data

## Company History

| Year | Month | Details |
|---|---|---|
| 2004 | Jul. | Vega Corporation (capitalized at 3 million yen) was established in Wakamatsu-ku, Kitakyushu-city, Fukuoka Prefecture. |
| | Oct. | Opened LOWYA Yahoo! Shopping Store |
| | Dec. | Opened LOWYA Rakuten Market Store |
| 2006 | Oct. | Opened LOWYA's own website flagship store |
| 2007 | Jun. | Company name changed to Vega Corporation. |
| | Sep. | Began purchasing large quantities of products from overseas furniture manufacturers and selling direct imports in containers. |
| 2010 | Nov. | Head office relocated to Gion-machi, Hakata-ku, Fukuoka-city, Fukuoka (current head office). Subsidiary NUBEE PTE.,LTD. established in Singapore |
| 2012 | Jan. | Subsidiary Nubee Tokyo Inc. established in Roppongi, Minato-ku, Tokyo. |
| 2013 | Oct. | The subsidiary business was reorganized and NUBEE PTE. LTD. was dissolved by transferring all business to Nubee Tokyo Co. |
| 2014 | Apr. | LOWYA Amazon store opened |
| 2015 | Dec. | Cross-border EC platform (DOKODEMO) to deliver Japanese products to the world goes into full-scale operation |
| 2016 | Mar. | Tokyo branch office and showroom opened in Ebisu, Shibuya-ku, Tokyo |
| | Jun. | Listed on Tokyo Stock Exchange Mothers (currently Tokyo Stock Exchange Growth Market) |
| 2018 | Nov. | Moved Tokyo Branch Office to Kita-Aoyama, Minato-ku, Tokyo |
| 2022 | Apr. | Moved to the Growth Market due to the revision of the market classification of the Tokyo Stock Exchange. |
| | Sep. | Started wholesale sales to AEON RETAIL Co. |
| | Sep. | Disclose real store development strategy |
| 2023 | Apr. | LOWYA's first directly managed store to open in Fukuoka |

Source: Compiled by JPR based on company data

# 3. Growth Story through GCC Management™ Framework

**Growth**

## Concept - Expansion of market share and stable growth in a 4.3 trillion yen market

### Conceptual Design: Infinite Possibilities for EC

**Conceptual design is logical and consistent since inception**

**Maintenance progress: 100%."**

**Focus: Early focus on the potential of EC**

Vega was founded in 2004, at a time when major companies were entering the EC market in its infancy: Rakuten Market in 1996, Yahoo! Shopping and Yahoo! Auction in 1999, and Amazon Marketplace in 2001.However, as early as the time when Internet specialty businesses were not common, Vega focused on the potential and appeal of the Internet, and its stance has remained consistent to this day.

**Setting a challenge: Provide furniture that is accessible and well-designed for young people.**

In EC, Vega focused on furniture and interior design. At the time of the company's founding, furniture was either too expensive or, if inexpensive, lacked attractive design. Therefore, Vega decided to match furniture and interior design that is both affordable and attractive to young people with EC.

**Conventional: 730 billion yen EC-ized**
**↓**
**Aiming for 4.3 trillion yen furniture and related market."**

**TAM/SAM/SOM: 4.3 trillion yen market**

The total for furniture and interior goods and related markets such as home appliances and sundries is 4.3 trillion yen. Of this total, the EC market for furniture and interior goods is 328.9 billion yen, and the related market is 395.2 billion yen. VEGA is targeting the 4.3 trillion yen market through the following three measures: (1) increasing the EC conversion rate in the mainstay furniture domain, (2) expanding categories and increasing the EC conversion rate in the related domain, and (3) expanding into real stores and sending customers to EC.

### Implementation Design: President's Intentional Transformation to Stable Growth

**More stability oriented with emphasis on stakeholder well-being value.**

**Maintenance progress: 70%**

Vega had a big sales growth in FY03/2021, thanks to the demand for the Corona disaster stay-at-home, and took a big step on the gas pedal there, but struggled for profits in FY3/2022 on the back of that growth and higher costs due to the recent depreciation of the yen. President Ukishiro's intention was to capture as much of the growth as possible, but after seeing the exhaustion of employees and the reaction of external stakeholders during the braking phase, he changed his mind, moving toward stable profits even if growth is limited to a certain level. The assumption is that there is still enough room in the non-EC conversion rate of the furniture and related markets to capture about 10% annual growth even with a safe strategy.

### Results: Not yet manifested. Expect to expand lifestyle business in the future.

**Reflection of results in Progress: 50%.**

**Results will be**

Although Vega's basic business model is consistent and its performance in this sense is satisfactory, it will not be until the next fiscal year that we will see the results of its emphasis on stable profits that will enable it to withstand high costs. Therefore, it will be interesting to see how the company performs in the coming fiscal years.

**Connection**

**Consistent since inception**
**Maintenance progress: 100%**

**Issue setting and strategies are highly valid.**
**Progress of maintenance: 70%**

**Areas of traditional strength**

**Measures implemented one after another**

**Degree of reaping results will be a point of focus in the next fiscal year and beyond**

**Reflection of results Progress: 30%**

# Online/Offline Integration to attract new customers

## Conceptual Design: Creating a mechanism that contributes to LTV improvement

Vega's goal is to contribute to the improvement of consumers' LTV through initiatives such as what is a system that makes customers happy, what products are attractive to customers, what stores are attractive to customers, and what UI/UX is best for customers. VEGA aims to provide not only furniture and interior goods, but also optimal matching based on the collection and analysis of consumers' needs.

## Implementation design: attract customers, enhance product assortment and services

Although the conceptual design is solidified, Vega can reach only 10% of the customers who have been converted to e-commerce. In addition, the recognition rate is only 15.4%, leaving a large room for upward mobility. Therefore, Vega is implementing measures to attract more customers, strengthen its product lineup, and enhance its services.

## Achievements: Continuous development of measures to increase customer contact points

### EC & D2C contributing to cost reduction

Since it is EC, rent and labor costs are lower than in a real store. In addition, because of D2C business model, no intermediary margins are required, resulting in lower prices for products.

### System for developing attractive designs

90% of PB products are designed in-house. The Product Development Department has 24 members, and the company is also focusing on human resources to realize its commitment to design.

### Attracting customers: Development of physical stores

The first directly managed store since the company's founding is scheduled to open in April 2023. The aim is to send customers to actually see LOWYA's products and link them to purchases on the EC.

### Attracting customers: Start of wholesale sales

Two LOWYA corners have been opened at wholesale outlets to increase points of contact with customers. This is a cooperative style of creating a sales space together, with an eye to sending customers to the EC.

### Attracting customers: use of SNS and media

Vega has 800,000 followers on Instagram, is ahead of its competitors on TikTok, and is currently reviewing the scale and timing of its TV commercials to further expand exposure.

### Strengthening product lineup: Started handling other companies' brands

While maintaining the strength of 90% PB products, Vega aims to create a platform by adding other brands as well, thereby acquiring new customers and strengthening customer retention.

### Service Enhancement: Establishment of OMO (online/offline) system

In addition to strengthening UI/UX and AR, which are Vega's strengths, it will greatly expand its services by utilizing real stores, including wholesale stores, to provide multiple online/offline options for recognition, purchase, and receipt.

## Confidence

**Although Vega's profit and loss suffered as a rebound from rapid growth, it is expected to improve in the future, aiming for a structure that is not dependent on foreign exchange rates. As for the evaluation, about 30%.**

**In furniture and interior design, it has spawned services that did not exist before. Although the evaluation of social contribution is still in its mid-stage, JPR judged it to be at least 50% of the average of listed companies.**

**New services such as DOKODEMO, a cross-border E-commerce service, are also expected to emerge in the future.**

## Stabilization of profit and loss for stable growth is the key

### Financial Stability: Shifted management policy to stabilize profit and loss

The furniture, interior and related markets were at a record 1.5 trillion yen in 2020 due to the Corona disaster's stay-at-home demand. Vega also benefited from this growth, with a significant 42.3% increase in sales for the fiscal year ended March 31, 2021. However, the following year, partly due to the lifting of the emergency declaration, sales declined by 12.9%, and are expected to land at a slight increase again this fiscal year. Furthermore, profit and loss also suffered due to the effects of the weak exchange rate.

#### Shift to profit-oriented policy

While the fruits of large growth uptake were great in spots, the volatility bore a sense of exhaustion within the company, and investors bore a sense of distrust of growth. Therefore, President Ukishiro decided to keep growth at 10% or more as long as fixed costs do not increase significantly, and shifted his policy to a level where profit and loss can fully absorb fluctuations in foreign exchange rates and other factors. This will allow Vega to target an operating profit margin of 10% even with the current exchange rate, and if the yen appreciates, profit and loss will be further boosted.

### Social contribution: Contribution to LTV improvement

#### Creating a new environment for enjoying furniture and interior design

Since its establishment, Vega's goal has been to provide the best products and services using the Internet. With this aim, it has produced affordable furniture and interior goods that did not exist before, thereby creating an environment in which people can enjoy the appeal of furniture and interior goods even if they are not high-end products.

#### Offline expansion to serve previously unreachable segments of the market

While the main battlefield for Vega will continue to be E-commerce, the offline expansion will enable it to reach a segment of the population that has never heard of Vega or that has always wanted to see it in person, expanding opportunities to experience the worldview it brings and enabling new customers to experience its value.

#### Information interactive design cycle to brir

Since its establishment, Vega has aimed to provide consumers with optimal services through EC and contribute to LTV improvement. The key is to incorporate the needs of consumers, develop and provide services that reflect those needs, build and improve business models that make this possible, and continue these loops. Since Vega's base is an IT company, the construction of an analysis and improvement loop utilizing IT/DX is one of its strong points. This cycle is expected to create new products and services that have never existed in society before.

# 4. Summary of Results for 3Q of Fiscal Year Ending March 31, 2023

## Profit and Loss Summary

## Profit and Loss Summary

### Company-wide results

**Summary**

Sales are recovering, but profits continue to decline

Sales were 12.467 billion yen (0.1% YoY), operating profit was 215 million yen (-52.2% YoY), recurring profit was 235 million yen (-50.2% YoY), and quarterly profit was 25 million yen (-91.8% YoY).

**Decrease in profit and cost reduction due to yen depreciation**

Profit decreased, but exceeded forecast due to cost reductions

Although net sales as a 3Q reached a record high, the cost of sales ratio was 49.2% in the period under review, compared to 44.2% in the same period of the previous year, due to the weaker yen, which was a major factor in the decline in profit. On the other hand, Vega reviewed its SG&A expenses to cope with the rising cost ratio, and achieved a 6.8-pt reduction YoY, resulting in profits that exceeded initial forecasts.

### LOWYA Business

**Summary**

Strong sales in 3Q

3Q non-consolidated GMV (gross merchandise value) was 4.2 billion yen (+5.9% YoY), and sales were strong at 4.0 billion yen (+7.5% YoY). Cumulative GMV was 12.673 billion yen (-3.1% YoY), and sales were 11.938 billion yen (-1.7% YoY), indicating that the negative trend is improving and offsetting the sales decline in 1Q and 2Q.

**Establishment of revenue base**

Profit down, but cost control continues

The number of members, an important management indicator, exceeded 1.31 million (+24.4% YoY), and the ratio of repeat customers was 25.4%, indicating that the company is making progress in establishing a revenue base. On the other hand, the cost of sales ratio rose by 7.4 pt, resulting in a decrease in profit, but the company also worked to consolidate its distribution bases, reducing SG&A expenses by 6.3 pt y-o-y.

**Major initiatives**

Emphasis on efforts to improve recognition and CX

・Opened the second wholesale store for AEON RETAIL Co.
・Directly-managed store scheduled to open in April 2023 at a complex in Fukuoka-City's Nishi-ku, Fukuoka Prefecture.

### LOWYA Business Key Indicators

| | Number of members (thousands) | Ratio of repeaters | Members: Average basket price (yen) | Guests: Average basket price (yen) |
|---|---|---|---|---|
| 3Q FY Mar.2022 | 1,057 | 21.8% | 23,047 | 20,210 |
| 3Q FY Mar.2023 | 1,313 | 25.4% | 22,436 | 19,139 |

Source: Prepared by JPR based on company data

## DOKODEMO Business

### Summary

Increase in both single and cumulative sales

On a stand-alone basis in 3Q FY03/2023, GMV was 1.198 billion yen (+17.4% YoY), sales were 163 million yen (+24.2% YoY), and year-to-date GMV was 4.017 billion yen (+58.1% YoY), sales were 529 million yen (+69.9% YoY).

### Factors behind the increase in sales

Both the number of members and the amount of purchases rose

The number of members grew steadily to 983,000 (+17.2% YoY) and the number of app downloads to 1,425,000 (+9.5% YoY). The ratio of repeat customers is as high as 83.6%. Furthermore, the amount of purchases per customer is also increasing.

### Business balance improved

Curtailment of prior investments

3Q stand-alone sales were down 5 million yen, but improved by 16 million yen compared to the previous year. Cumulative total has also improved significantly, and the company continues to grow while keeping upfront investments low.

### Major Initiatives

・Applications are available in English, Chinese (simplified and traditional), Korean, and Japanese.
・ Provides a platform for purchasing a variety of Japanese products, including cosmetics, pharmaceuticals, and food products.

## DOKODEMO Business Key Indicators

| | Number of members (thousands) | Number of APP DLs | Purchase amount per person (yen) | Ratio of repeaters |
|---|---|---|---|---|
| 3Q FY Mar.2022 | 839 | 1,301 | 12,661 | 70.7% |
| 3Q FY Mar.2023 | 983 | 1,425 | 13,582 | 83.6% |

Source: Prepared by JPR based on company data

## 5. Exchange rate effect 130~135 yen →120~125 yen

**Shareholder Value Analysis**

**Maximum upside in market capitalization estimated at 5.5x**

### Estimate using the excess profit method

#### Upside up to 5.5x depending on growth scenario

If the exchange rate were 120~125 yen as indicated on the first page, the estimates would be as follows.

*The exchange rate assumptions are based on historical analysis and future projections by applying average exchange rates based on past disclosures. Please note that there is a risk that the actual assumptions may change due to currency hedging and other factors, and that the shareholder value estimated by JPR may change accordingly.

**Shareholder Value Analysis**

## Qualitative Story Outline

**Growth: Expansion of market share and stable growth in the 4.3 trillion yen market**

**Connection: Reach new customers through online/offline integration**

**Confidence: Stabilization of profit/loss for stable growth is key**

▼

## Quantitative Story Framework

Market capitalization: 6.7

value gap

Maximum upside to market capitalization = 5.5times

**Shareholder value reflecting maximum 10-year growth scenario[1] + 125 yen exchange rate effect**

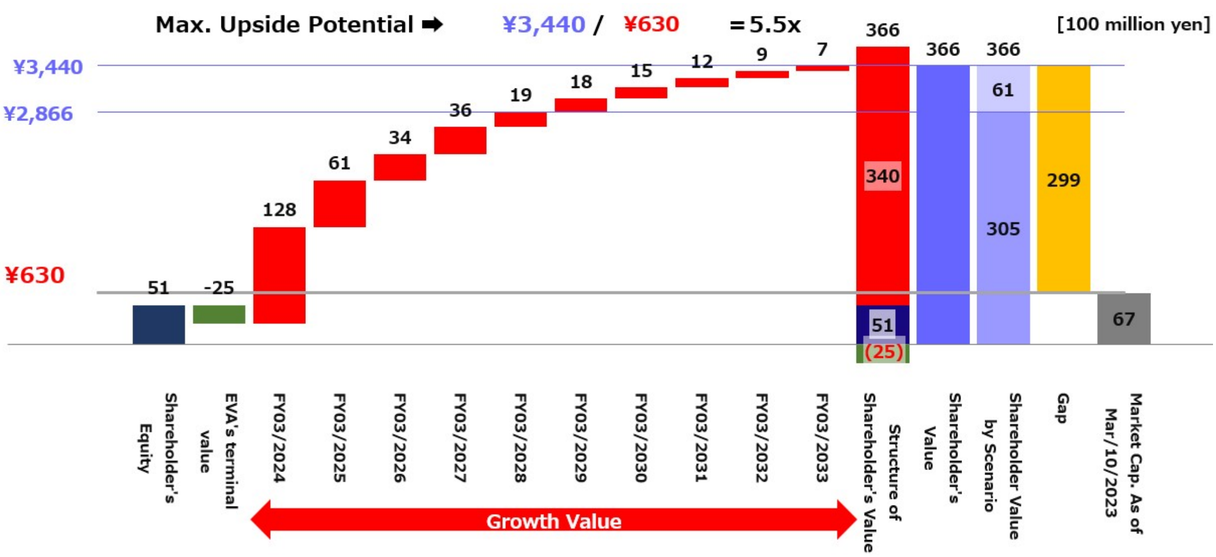
capital stock51+excess profit value-25+growth value340= 364 billion yen

| capital stock | excess profit | growth value |
|---|---|---|
| 51 | -25 | 340 |

source:JPR

1: Fractions do not match due to rounding.

## Excess value valuation of Quantum Solutions.




[Source] JPR

## Shareholder Value Structure and Value Gap Analysis Using the Excess Profit Method (Deta

| [¥100mn] | Current Year 2023.03 | 1 year later 2024.03 | 2 years later 2025.03 | 3 years later 2026.03 | 4 years later 2027.03 | 5 years later 2028.03 | 6 years later 2029.03 | 7 years later 2030.03 | 8 years later 2031.03 | 9 years later 2032.03 | 10 years later 2033.03 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sales | 171 | 184 | 203 | 223 | 245 | 270 | 294 | 315 | 333 | 349 | 361 |
| Operating income | 3.0 | 16.2 | 23.6 | 28.1 | 33.4 | 36.7 | 40.0 | 42.9 | 45.4 | 47.5 | 49.2 |
| Operating margin | 1.8% | 8.8% | 11.6% | 12.6% | 13.6% | 13.6% | 13.6% | 13.6% | 13.6% | 13.6% | 13.6% |
| Sales growth rate | 1.3% | 8.0% | 10.0% | 10.0% | 10.0% | 10.0% | 9.0% | 7.2% | 5.8% | 4.6% | 3.7% |
| NOPAT margin | 1.2% | 6.1% | 8.0% | 8.7% | 9.4% | 9.4% | 9.4% | 9.4% | 9.4% | 9.4% | 9.4% |
| Invested capital turnover ratio | 32.6% | 29.2% | 29.2% | 29.2% | 29.3% | 29.3% | 29.3% | 29.4% | 29.4% | 29.4% | 29.4% |
| WACC | 6.8% | 6.8% | 6.8% | 6.8% | 6.8% | 6.8% | 6.8% | 6.8% | 6.8% | 6.8% | 6.8% |
| ROIC = NOPAT margin ÷ invested capital net sales ratio | 3.7% | 20.8% | 27.5% | 29.9% | 32.1% | 32.1% | 32.2% | 32.0% | 32.0% | 32.0% | 32.0% |
| ROIC / WACC (value created with the original hand of 1 y | ¥0.6 | ¥3.1 | ¥4.1 | ¥4.4 | ¥4.8 | ¥4.8 | ¥4.8 | ¥4.7 | ¥4.7 | ¥4.7 | ¥4.7 |
| NOPAT | 2.07 | 11.19 | 16.28 | 19.45 | 23.09 | 25.40 | 27.68 | 29.67 | 31.38 | 32.83 | 34.04 |
| Invested capital × WACC | 3.76 | 3.64 | 4.00 | 4.40 | 4.86 | 5.34 | 5.82 | 6.26 | 6.62 | 6.93 | 7.18 |
| EVA | -1.68 | 7.55 | 12.2828 | 15.05 | 18.23 | 20.05 | 21.86 | 23.41 | 24.76 | 25.91 | 26.86 |
| EVA = NOPAT - invested capital × WACC | -1.68 | 7.55 | 12.28 | 15.05 | 18.23 | 20.05 | 21.86 | 23.41 | 24.76 | 25.91 | 26.86 |
| Value created in each year | -25 | 137 | 70 | 41 | 47 | 27 | 27 | 23 | 20 | 17 | 14 |
| Discount Rate | 100% | 94% | 88% | 82% | 77% | 72% | 68% | 63% | 59% | 55% | 52% |
| **Present value of EVA** | **-24.900** | **128** | **61** | **34** | **36** | **19** | **18** | **15** | **12** | **9** | **7** |
| **Invested capital ① Origin** | **56** | | | | | | | | | | |
| **Over profit value (Permanent value of EVA of this ter** | **-25** | | | | | | | | | | |
| **Growth value (Present value of increase in EVA) ③** | **340** | | | | | | | | | | |
| **Non-business asset value ④** | **1** | | | | | | | | | | |
| **Corporate value = ① + ② + ③ + ④** | **371** | | | | | | | | | | |
| **Interest-bearing debt, etc.** | **-5** | | | | | | | | | | |
| **Shareholder value** | **366** | | | | | | | | | | |

[Source] JPR

# Appendeix: Details of the financial model

| | [1 million yen] | Corporate plan JPR projection | JPR projection | JPR projection | JPR projection | JPR projection | JPR projection | JPR projection | JPR projection | JPR projection | JPR projection | JPR projection |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| FY | | 2023.03 | 2024.03 | 2025.03 | 2026.03 | 2027.03 | 2028.03 | 2029.03 | 2030.03 | 2031.03 | 2032.03 | 2033.03 |
| PL | Sales | **17,050** | 18,414 | 20,255 | 22,281 | 24,509 | 26,960 | 29,386 | 31,502 | 33,317 | 34,852 | 36,137 |
| | COGS | **8,383** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | SGA | 8,367 | 16,796 | 17,901 | 19,468 | 21,170 | 23,287 | 25,382 | 27,210 | 28,777 | 30,103 | 31,213 |
| | EBITDA | 446 | 1,760 | 2,511 | 2,985 | 3,529 | 3,881 | 4,228 | 4,531 | 4,790 | 5,010 | 5,190 |
| | Total Depreciation Expense | 146 | 142 | 157 | 172 | 190 | 208 | 224 | 239 | 251 | 261 | 266 |
| | OP | **300** | 1,618 | 2,355 | 2,813 | 3,339 | 3,673 | 4,004 | 4,292 | 4,539 | 4,749 | 4,924 |
| | Interest rate | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | Other Nonoperating Income | 22 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | CP | **320** | 1,617 | 2,355 | 2,813 | 3,339 | 3,673 | 4,004 | 4,292 | 4,539 | 4,749 | 4,924 |
| | Extraordinary Gains/Losses | **▲ 120** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | Tax | 128 | 500 | 728 | 869 | 1,032 | 1,135 | 1,237 | 1,326 | 1,403 | 1,467 | 1,521 |
| | NP | **72** | 1,117 | 1,627 | 1,944 | 2,307 | 2,538 | 2,767 | 2,966 | 3,137 | 3,281 | 3,402 |
| | Initial Outstanding Shares (Thousands) | 10,634 | 10,635 | 10,637 | 10,637 | 10,637 | 10,637 | 10,637 | 10,637 | 10,637 | 10,637 | 10,637 |
| | Outstanding Shares (Thousands) | 1 | 1,200 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | Period End Outstanding Shares (Thousands) | **10,635** | 10,637 | 10,637 | 10,637 | 10,637 | 10,637 | 10,637 | 10,637 | 10,637 | 10,637 | 10,637 |
| | EPS (JPY) | 6.8 | 105 | 153 | 183 | 217 | 239 | 260 | 279 | 295 | 308 | 320 |
| | Dividend (JPY) | **10** | 12 | 15 | 18 | 22 | 26 | 31 | 36 | 41 | 46 | 52 |
| | Dividend | 106 | 126 | 155 | 191 | 233 | 278 | 327 | 380 | 434 | 490 | 548 |
| | Retained Earning | ▲ 34 | 992 | 1,472 | 1,753 | 2,075 | 2,260 | 2,439 | 2,586 | 2,703 | 2,791 | 2,854 |
| BS | Operating cash | 2,302 | 2,532 | 2,785 | 3,064 | 3,370 | 3,673 | 3,938 | 4,165 | 4,356 | 4,517 | 4,517 |
| | Working Capital | 4,025 | 4,428 | 4,871 | 5,358 | 5,894 | 6,424 | 6,886 | 7,283 | 7,619 | 7,900 | 7,900 |
| | ST investment securities | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | Tangible Fixed Assets | **177** | 194 | 214 | 235 | 259 | 282 | 302 | 320 | 335 | 347 | 347 |
| | Goodwill | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | Software | **227** | 250 | 275 | 302 | 332 | 362 | 388 | 411 | 430 | 445 | 445 |
| | Investment Securities | **182** | 182 | 182 | 182 | 182 | 182 | 182 | 182 | 182 | 182 | 182 |
| | Other Assets | 614 | 676 | 743 | 817 | 899 | 980 | 1,051 | 1,111 | 1,162 | 1,205 | 1,205 |
| | Total Assets | **7,527** | 8,327 | 10,004 | 11,983 | 14,307 | 16,813 | 19,467 | 22,237 | 25,095 | 28,016 | 30,870 |
| | NIBCLs | 1,868 | 2,055 | 2,260 | 2,486 | 2,735 | 2,981 | 3,196 | 3,380 | 3,535 | 3,666 | 3,666 |
| | ST debt | 379 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | LT debt | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | Other Fixed Liabilities | **45** | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 |
| | Paid Capital | 2,016 | 2,016 | 2,016 | 2,016 | 2,016 | 2,016 | 2,016 | 2,016 | 2,016 | 2,016 | 2,016 |
| | Retained Earnings | 3,220 | 4,211 | 5,683 | 7,436 | 9,511 | 11,771 | 14,210 | 16,796 | 19,499 | 22,290 | 25,144 |
| | Debt&Equity | 7,527 | 8,327 | 10,004 | 11,983 | 14,307 | 16,813 | 19,467 | 22,237 | 25,095 | 28,016 | 30,870 |
| CF | Operating cash | ▲ 1,231 | ▲ 230 | ▲ 253 | ▲ 279 | ▲ 306 | ▲ 303 | ▲ 264 | ▲ 227 | ▲ 192 | ▲ 161 | 0 |
| | Working Capital | 1,581 | ▲ 403 | ▲ 443 | ▲ 487 | ▲ 536 | ▲ 530 | ▲ 463 | ▲ 397 | ▲ 336 | ▲ 281 | 0 |
| | NIBCLs | 167 | 187 | 205 | 226 | 249 | 246 | 215 | 184 | 156 | 130 | 0 |
| | Tangible Fixed Assets Investment | ▲ 12 | ▲ 65 | ▲ 71 | ▲ 78 | ▲ 86 | ▲ 92 | ▲ 94 | ▲ 96 | ▲ 98 | ▲ 99 | ▲ 88 |
| | Depreation of Tnagible Fixed Assets | 50 | 47 | 52 | 57 | 63 | 69 | 74 | 79 | 83 | 86 | 88 |
| | SoftwareInvestments | ▲ 69 | ▲ 118 | ▲ 130 | ▲ 143 | ▲ 157 | ▲ 169 | ▲ 176 | ▲ 182 | ▲ 187 | ▲ 191 | ▲ 178 |
| | Software Depreciation | 96 | 95 | 105 | 115 | 127 | 139 | 150 | 160 | 168 | 175 | 178 |
| | Goodwill Investment | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | Goodwill depreciation | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | ST investment securities | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | Investment Securities | 122 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | Other Assets | ▲ 42 | ▲ 61 | ▲ 68 | ▲ 74 | ▲ 82 | ▲ 81 | ▲ 71 | ▲ 61 | ▲ 51 | ▲ 43 | 0 |
| | Retained Earnings | ▲ 34 | 992 | 1,472 | 1,753 | 2,075 | 2,260 | 2,439 | 2,586 | 2,703 | 2,791 | 2,854 |
| | CF from operation | 626 | 444 | 869 | 1,090 | 1,346 | 1,538 | 1,810 | 2,047 | 2,246 | 2,409 | 2,854 |
| | ST debt | ▲ 621 | ▲ 379 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | LT debt | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | Other Fixed Liabilities | ▲ 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | Equity Financing | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | CF from finance | ▲ 626 | ▲ 379 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

| | [1 million yen] | Corporate plan JPR projection | JPR projection | JPR projection | JPR projection | JPR projection | JPR projection | JPR projection | JPR projection | JPR projection | JPR projection | JPR projection |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| FY | | 2023.02 | 2024.02 | 2025.02 | 2026.02 | 2027.02 | 2028.02 | 2029.02 | 2030.02 | 2031.02 | 2032.02 | 2033.02 |
| KPI | Initial Invested Capital Sales Ratio | 35.3% | 29.2% | 29.2% | 29.3% | 29.3% | 29.3% | 29.4% | 29.4% | 29.4% | 29.4% | 29.4% |
| | Deferred Hedge Gains/Losses | -0.1 | -109 | -109 | -109 | -109 | -109 | -109 | -109 | -109 | -109 | -109 |
| | Land Revaluation | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | Exchange Adjustment Account | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| | Initial Invested Capital | 6,015 | 5,368 | 5,916 | 6,518 | 7,181 | 7,910 | 8,632 | 9,261 | 9,801 | 10,257 | 10,640 |
| | sales growth | 1.3% | 8.0% | 10.0% | 10.0% | 10.0% | 10.0% | 9.0% | 7.2% | 5.8% | 4.6% | 3.7% |
| | COGS/Sales (Exchange Rate 130.2 Yen) | 49% | 47.2% | 45.2% | 45.2% | 45.2% | 45.2% | 45.2% | 45.2% | 45.2% | 45.2% | 45.2% |
| | COGS/Sales (Exchange Rate 120.0 Yen) | 49% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| | SG&A ratio | 47.4% | 42.1% | 37.1% | 36.1% | 35.1% | 35.1% | 35.1% | 35.1% | 35.1% | 35.1% | 35.1% |
| | OP Margin | | 5.0% | 8.0% | 9.0% | 10.0% | 10.0% | 10.0% | 10.0% | 10.0% | 10.0% | 10.0% |
| | NOPAT | 207 | 1,118 | 1,627 | 1,944 | 2,307 | 2,538 | 2,767 | 2,966 | 3,137 | 3,281 | 3,402 |
| | ROIC | 3.4% | 20.8% | 27.5% | 29.8% | 32.1% | 32.1% | 32.1% | 32.0% | 32.0% | 32.0% | 32.0% |
| | Working Capital DOH | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 |
| | NIBCLs DOH | 36 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 | 37 |
| | CASH required | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 |
| | ST interest rate | 0.25% | 0.25% | 0.25% | 0.25% | 0.25% | 0.25% | 0.25% | 0.25% | 0.25% | 0.25% | 0.25% |
| | DT interest rate | 0.27% | 0.27% | 0.27% | 0.27% | 0.27% | 0.27% | 0.27% | 0.27% | 0.27% | 0.27% | 0.27% |
| | Tax rate | 30.9% | 30.9% | 30.9% | 30.9% | 30.9% | 30.9% | 30.9% | 30.9% | 30.9% | 30.9% | 30.9% |
| | Pay out ratio | 83.1% | 0.0% | 0.0% | 0.0% | 0.0% | 30.0% | 40.0% | 60.0% | 70.0% | 100.0% | 100.0% |
| | Dividends / Shareholders' Equity Book Value (DOE) | 2.0% | 2.0% | 2.0% | 2.0% | 2.0% | 2.0% | 2.0% | 2.0% | 2.0% | 2.0% | 2.0% |
| | Gross DE Ratio | 7.2% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| | Net DE Ratio | -36.7% | -41.7% | -48.3% | -53.8% | -58.5% | -62.2% | -65.7% | -68.7% | -71.4% | -73.8% | -76.6% |
| | Tangible Fixed Assets Depreciation Ratio | 22.5% | 22.5% | 22.5% | 22.5% | 22.5% | 22.5% | 22.5% | 22.5% | 22.5% | 22.5% | 22.5% |
| | Goodwill Depreciation Ratio | 10.0% | 10.0% | 10.0% | 10.0% | 10.0% | 10.0% | 10.0% | 10.0% | 10.0% | 10.0% | 10.0% |
| | Software Depreciation Ratio | 33.3% | 33.3% | 33.3% | 33.3% | 33.3% | 33.3% | 33.3% | 33.3% | 33.3% | 33.3% | 33.3% |
| | Offshore Procurement Ratio | 95% | 95% | 95% | 95% | 95% | 95% | 95% | 95% | 95% | 95% | 95% |
| | Domestic Procurement Cost [1 million yen] | 419 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | Offshore Procurement Cost [1 million yen] | 7,964 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | Offshore Procurement Cost [thousands of U.S. dollars] | 58,366 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | Exchange Eate [USD/JPY] | 136.5 | 130.2 | 130.2 | 130.2 | 130.2 | 130.2 | 130.2 | 130.2 | 130.2 | 130.2 | 130.2 |
| | Weaker Yen Scenario. Exchange Rate [USD/JPY] | | 120.0 | 120.0 | 120.0 | 120.0 | 120.0 | 120.0 | 120.0 | 120.0 | 120.0 | 120.0 |
| | Exchange Rate [USD/JPY] Offshore Procurement Cost [thousands of U.S. dollars] | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | Effect on Operating Income | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | NOPAT Improvements | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | Yen Depreciation Operating Income | | 925 | 1,625 | 2,010 | 2,457 | 2,702 | 2,945 | 3,157 | 3,339 | 3,493 | 3,622 |

# Reference 1. For those new to JPR reports

## GCC Management™ Analysis

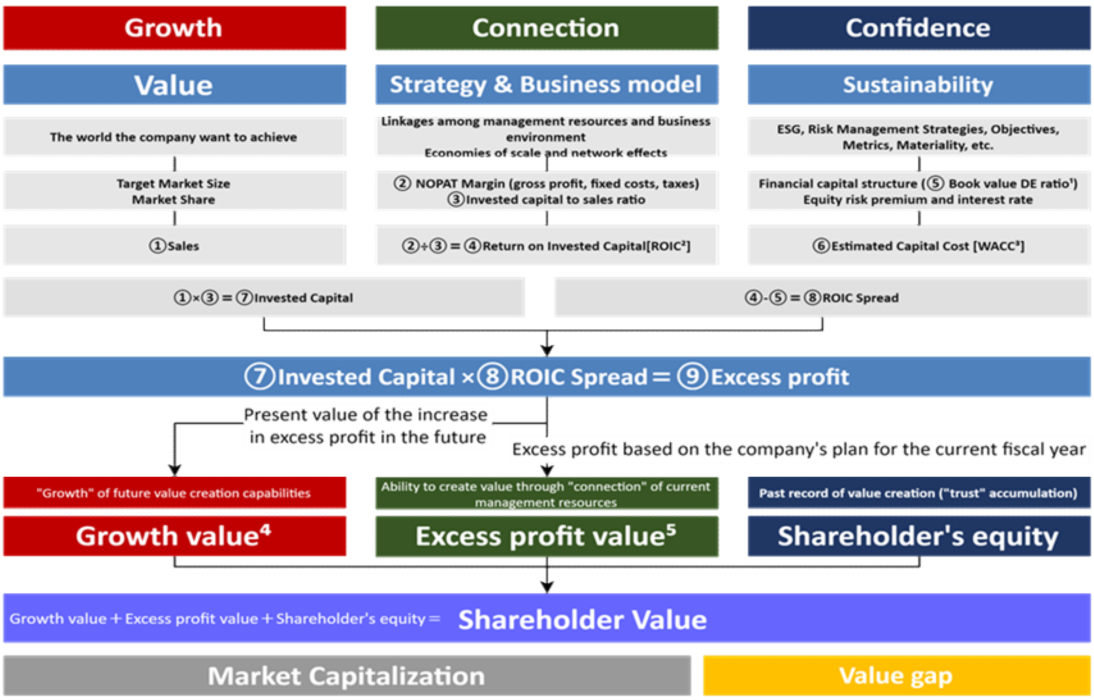
**Analyze by the three elements of Growth, Connection, and Confidence**

### A framework for directly linking qualitative stories to shareholder value

**Visualize the value gap between theoretical shareholder value and market capitalization**

This report analyzes corporate value from the perspective of GCC Management™, a framework developed by J-Phoenix Research Corporation ("JPR"), emphasizing three elements: Growth (sales growth), Connection (improved human and business connections = higher return on capital), and Confidence (improved trust = lower business risk). The following chart shows the overall picture of the GCC Management™ framework. The following diagram shows the overall picture. The qualitative future story is linked to financial indicators, which are finally integrated to estimate shareholder value. Using the excess profit method (see "Appendix 3. Basis of Calculation" at the end of this report), JPR estimates the final theoretical shareholder value and visualize the value gap by comparing it with the market capitalization.

### GCC Management™ Analysis Framework




[Source: JPR] [Notes] 1. Book value DE ratio: Ratio of interest-bearing debt to shareholders' equity.
2. ROIC: Return on Invested Capital, See "Appendix 3." at the end of this document. 3. WACC: Weighted Cost of Capital, see "Appendix 3." at the end of this document. 4. growth value = cumulative present value of the perpetuity value of the excess profit increment through year X. The perpetuity value is calculated as the excess profit increment divided by WACC. The present value of that amount is discounted by the WACC. Cumulative future value up to year X as assumed by the growth scenario. 5. Excess profit value = the perpetual value of excess profit based on the current year's company plan. The excess profit value is estimated by dividing the excess profit calculated from the current year's company plan and the invested capital at the beginning of the period by the WACC.

Source: JPR

## Visualization of value gap through 10-year growth scenario analysis

### Comparison of increase in shareholder value and market capitalization by year

**Visualize how many years of future stories are reflected in the market capitalization**

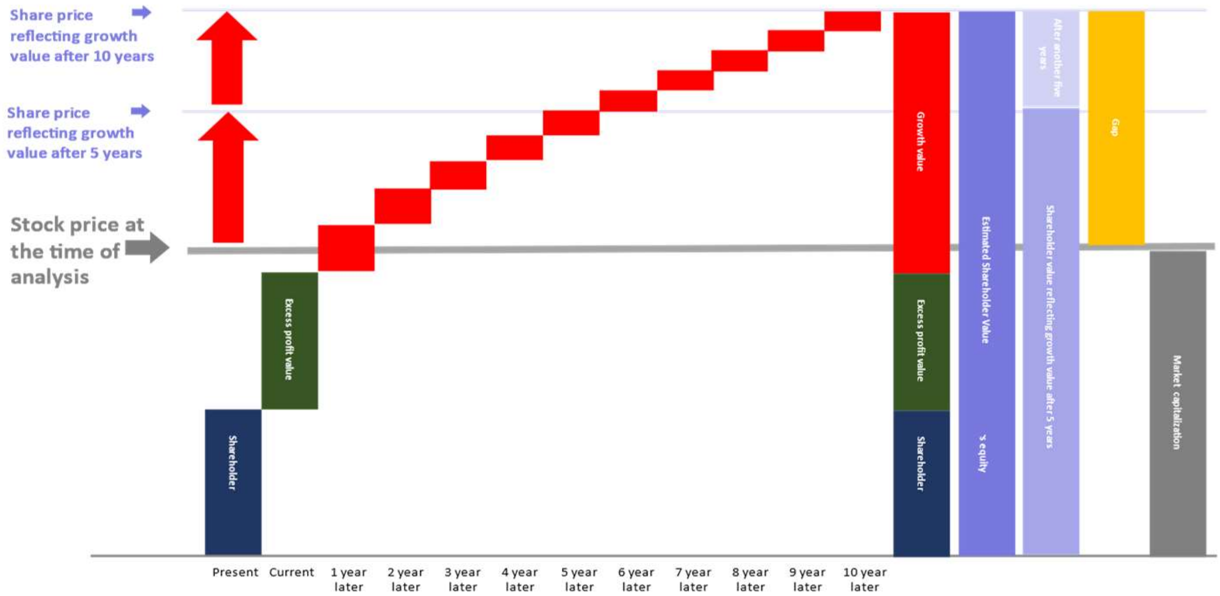
The potential increase in shareholder value generated by a 10-year growth scenario based on the future story is visualized for each year and compared to the market capitalization. This allows us to visualize how many years of the future story are reflected in the market capitalization. 10 years of shareholder value is expected to be reflected in the market capitalization as the expectations for the achievability of the 10-year future story increase. The difference between the market capitalization and the estimated shareholder value reflecting up to 10 years of future story is the estimated upside potential. As investors' expectations of the feasibility of the future story are raised by the specific current performance, the likelihood of the realization of that value gap increases.

### Conservative Growth Scenarios and Scenarios Reflecting Change in Future Stories

**Visualization of various scenario analysis**

This analysis is useful when the firm's strategy undergoes significant change. As shown in the figure below, it is also possible to visualize separately the growth potential under the conservative scenario and the growth potential under the change. Shareholder value without incorporating change represents a conservative amount.

### Visualizing the Value Gap




[source] JPR

# Appendix 2. Basis of Calculation

## Corporate value estimated by use of ROIC and excess return

### Excess return analysis framework

Excess profit or economic value added is globally used as an indicator to estimate corporate value, evidenced by its adoption by Kao Corporation, a Grand Prix winner of the Tokyo Stock Exchange Fifth Corporate Value Improvement Award (FY2016). In the calculation of excess return, corporate value can be broken down into four elements: invested capital, excess return value, growth value, and non-business assets. This facilitates a better understanding of the structure that creates corporate value. A company might be overvalued or undervalued when its market cap is higher or is lower than its theoretical corporate value, respectively. The contribution of each year's corporate value can be visualized in the following figure, wherein shareholders' equity is simply represented as a sum of invested capital and non-business asset, subtracting interest-bearing debts. The figure below allows us to estimate how many years of growth might be incorporated into the stock price.

### Breakdown of corporate value using excess return


[source] JPR

Estimated excess return is profit that exceeds investors' return expectations against invested capital. Its present value is “excess return value,” while a potentially growing portion of excess return is “growth value.” Moreover, assets not used in business are added as non-business asset value in estimating a theoretical corporate value. Theoretically, the estimated corporate value using excess return should be the same as the value estimated using the discount cash flow (DCF) model. This report calculates excess return by using the following figures in a simplified manner.

Excess return = NOPAT – Invested capital X WACC
Net Operating Profit After Tax (NOPAT) = Operating profit X (1 - Effective tax rate)
Invested capital = Total assets – Non-business assets – Current liabilities excluding Interest-bearing debt
Non-business assets = Cash and deposits exceeding 10% of sales + Short-term investment securities + Investment securities + Deferred gains or losses on hedges + Land revaluation difference + Foreign currency translation adjustments
Weighted average cost of capital (WACC) = After-tax interest rate of interest-bearing debt Ｘ(D/(E+D)+Cost of shareholders' equity Ｘ(E/D+E)
Cost of shareholders' equity=0.5%+5%Ｘβ
β = Slope of a linear regression line of five-year daily returns of TOPIX and the stock price of the target company
E = Market cap at the time of calculation
D = Short-term interest-bearing debt + Long-term liabilities + Minority interests in the latest

# Disclamer

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