4847 INTELLIGENT WAVE INC.

Sponsored Research
August 31, 2020

Sessa Investment Research

INITIATION

INTELLIGENT WAVE INC.

Focus Points:

Systems integrator boasting an overwhelming share with credit card companies in FEP systems development for nonstop secure datacenter connection packages.

Key Indicators	
Share price (8/28)	783
YH (20/8/6)	918
YL (20/3/23)	398
10YH (18/10/24)	1,180
10YL (11/3/16)	160
Shrs out. (mn shrs)	26.34
Mkt cap (¥ bn)	20.62
EV (¥ bn)	16.98
Equity ratio	66.2%
FY6/21 P/E (CE)	25.1x
FY6/20 ROE (act)	11.4%
FY6/20 P/B (act)	2.95x
FY6/21 DY (CE)	1.28%

Share price chart (weekly)



Source: SPEEDA

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Major beneficiary of structural growth in core customer sector Japan's credit card industry

SUMMARY

- Founded in 1984 as one of Japan's pioneer fintech companies, IWI dominates the niche market for online transaction processing systems for credit cards which enable nonstop secure transaction processing in real-time, 24/7. Credit card companies, IWI's core customer base, are enjoying robust structural growth not only from the ongoing shift to e-commerce, but also from government policy promoting raising the ratio of cashless payments, as the primary cashless vehicle.

- In this initiation report, we examine 4 key questions for the company. ① How did IWI capture such an overwhelming share with credit card companies in FEP (front-end processing) systems development, is there a recurring element from replacement demand, and what is the business opportunity from structural growth in the credit card industry? ② Why is profitability so low for Product Solutions cyber security software? ③ What are the benefits from being part of the DNP Group, and what governance measures are in place to protect minority shareholders? ④ What are the key growth initiatives included in the Medium-Term Management Plan?

- Regarding question ①, founder Kazuhiko Adachi, previously president of Tandem Computers Japan, recognized the huge potential for applications of the proprietary operating system developed by Stratus for online credit card payment transactions, successfully gaining a strong foothold in authorization center connection packages. FEP systems are replaced/upgraded every 5-6 years, providing a recurring stock business element that supports stable growth. While there is no direct benefit from high structural growth in credit card transaction value per se, it does support ongoing capex for credit card companies, the main driver of IWI's FEP orders.

- Regarding question ②, Product Solutions margins are pressured by the high weight of outside third-party cyber security package software sales, and unlike the consumer market, corporate packages are complex and require a long lead time in educating customers, with no guarantee of success.

- Regarding question ③, DNP's own IC card and credit card system solutions business complements and reinforces the company's dominant position in Japan's credit card industry. DNP consistently ranks as the no.1 or no.2 top client, contributing roughly ¥2.0 billion in annual revenue. DNP project terms are reviewed by a board committee to ensure fairness and that no conflict of interest is working to the disadvantage of IWI.

- Regarding question ④, new business in cloud service targeting the regional banks, offering functionality of its flagship products in authorization center connection and fraud detection, as well as acquiring bank operations support, is the central component of migrating from flow business to recurring stock business.

This report was prepared by Sessa Partners on behalf of INTELLIGENT WAVE INC. Please refer to the legal disclaimer at the end for details.

INTELLIGENT WAVE INC. Earnings Highlights at a Glance

[J-GAAP] JPY mn, %	FY6/15 Consol act	FY6/16 Consol act	FY6/17 NC act	FY6/18 NC act	FY6/19 NC act	FY6/20 NC init CE	FY6/20 NC act	FY6/21 init CE
Net sales	**6,160**	**7,206**						
Net sales (non-consol)	6,160	7,205	**8,469**	**10,603**	**10,443**	**10,600**	**10,920**	**11,000**
YoY	(6.1)	17.0	17.5	25.2	(1.5)	1.5	4.6	0.7
by reporting segment								
Financial Systems Solutions	**5,555**	**6,386**	**7,447**	**9,332**	**9,336**	**9,400**	**9,857**	
• Software development	3,252	4,016	4,835	6,439	5,668	5,960	5,791	
• Software maintenance	835	824	919	1,041	1,124	1,220	1,246	
• Hardware	949	793	974	923	1,140	870	1,526	
• In-house package software	247	308	262	242	512	240	244	
• Cloud service	—	—	179	386	637	800	828	
• Third party package software	270	443	277	299	254	310	220	
Product Solutions	**604**	**820**	**1,022**	**1,271**	**1,106**	**1,200**	**1,063**	
• Software development	47	52	62	89	72	60	53	
• Software maintenance	255	236	253	212	282	290	276	
• Hardware	13	9	46	365	82	40	44	
• In-house package software	74	136	122	58	133	80	89	
• Third party package software	214	385	537	545	534	730	600	
Net sales (non-consol)*							**10,920**	**11,000**
• Software development							5,791	5,362
• Software maintenance							1,246	1,284
• Hardware							1,526	1,494
• In-house package software							244	397
• Cloud service							828	940
• Third party package software							220	423
• Security products							1,063	1,100
Gross profit	1,779	1,993	2,132	2,223	2,807	—	2,981	—
GPM	*28.9%*	*27.7%*	*25.2%*	*21.0%*	*26.9%*		*27.3%*	
SG&A expenses	1,295	1,279	1,430	1,675	1,885	—	1,944	—
Ratio to sales	*21.0%*	*17.7%*	*16.9%*	*15.8%*	*18.1%*		*17.8%*	
Depreciation	255	213	337	485	707	600	605	—
EBITDA	739	927	1,039	1,032	1,628	1,600	1,641	—
EBITDA margin	*12.0%*	*12.9%*	*12.3%*	*9.7%*	*15.6%*	*15.1%*	*15.0%*	
Operating profit	**484**	**714**						
Operating profit (non-consol)	488	731	**702**	**547**	**921**	**1,000**	**1,036**	**1,150**
OPM	*7.9%*	*9.9%*	*8.3%*	*5.2%*	*8.8%*	*9.4%*	*9.5%*	*10.5%*
YoY	232.8	47.5	(4.0)	(22.0)	68.3	8.5	12.5	11.0
by reporting segment								
Financial Systems Solutions	**632**	**670**	**651**	**598**	**890**	**960**	**1,123**	
OPM	*11.4%*	*10.5%*	*8.7%*	*6.4%*	*9.5%*	*10.2%*	*11.4%*	
YoY	—	6.0	(2.8)	(8.1)	48.8	7.9	26.2	
Product Solutions	**(148)**	**43**	**51**	**(51)**	**31**	**40**	**(87)**	
OPM	*-24.5%*	*5.2%*	*5.0%*	*-4.0%*	*2.8%*	*3.3%*	*-8.2%*	
YoY	—	TB	18.6	TR	TB	29.0	TR	
Ordinary profit	490	730						
Ordinary profit (non-consol)	492	750	766	574	954	1,040	1,074	1,190
Profit attributable to owners of par.	**471**	**478**						
Net income (non-consol)	399	513	**547**	**377**	**684**	**720**	**762**	**820**
Ratio to sales	*7.6%*	*6.6%*	*6.5%*	*3.6%*	*6.5%*	*6.8%*	*7.0%*	*7.5%*
YoY	443.2	1.6	6.6	(31.0)	81.2	5.3	11.4	7.6
EPS (¥)	17.89	18.18	20.78	14.36	25.99	27.37	29.00	31.18
DPS (¥)	5.00	6.00	7.00	7.00	9.00	9.00	10.00	10.00
BPS (¥)	183.55	192.21	214.51	217.18	242.23	—	265.55	—

Source: compiled by Sessa Partners from TANSHIN financial statements and company results briefing slides.

Note: IWI liquidated its Korea subsidiary in June 2016, with accounts becoming non-consolidated from FY6/17.
*Change of reporting segments in FY6/21 to one single segment.

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Key Questions

① *How did IWI capture such an overwhelming share with credit card companies in FEP (front-end processing) systems development, is there a recurring element from replacement demand, and what is the opportunity from structural growth in the credit card industry?*
② *Why is profitability so low for Product Solutions cyber security software?*
③ *What are the benefits from being part of the DNP Group, and what governance measures are in place to protect minority shareholders?*
④ *What are the key growth initiatives included in the Medium-Term Management Plan?*

Description of Business Segments

- **Financial Systems Solutions Business:** development of core system software, related server hardware sales and system maintenance for financial industry customers including credit card companies, banks and securities brokers. FEP (front-end processor) systems used by credit card companies are authorization connection packages which securely handle large volumes of high-speed credit card transactions in real-time 24/7, where the company has accumulated the dominant share.
- **Products Solutions Business:** sales and maintenance of package software for information and cyber security. Margins are pressured by the high weight of outside third-party package software. Unlike consumer cyber security applications dominated by a handful of players with well-defined functionality, high-end corporate packages are complex and require a long lead time in educating customers, with no guarantee of success.

INTELLIGENT WAVE INC. Other Key Financial indicators

JPY mn, %	FY6/15 Consol act	FY6/16 Consol act	FY6/17 NC act	FY6/18 NC act	FY6/19 NC act	FY6/20 NC act
Cash and deposits	2,957	2,852	2,578	2,839	3,254	3,641
Interest bearing debt	0	0	0	0	0	0
Net cash (net debt)	2,957	2,852	2,578	2,839	3,254	3,641
Total shareholders' equity	4,563	4,910	5,222	5,408	5,908	6,433
Accumulated other comp. inc.	271	152	—	—	—	—
Valuation & translation adj.	—	—	425	306	464	549
Total net assets	4,834	5,062	5,647	5,715	6,372	6,983
Total assets	6,481	7,026	8,508	8,837	10,032	10,552
Equity ratio (%)	*74.6*	*72.1*	*66.4*	*64.7*	*63.5*	66.2
ROE (%)	*10.1*	*9.7*	*10.3*	*6.6*	*11.3*	*11.4*
Amount dividends paid	131	158	184	184	236	262
Payout ratio (%)	*28.0*	*33.0*	*33.7*	*48.8*	*34.6*	*34.5*
DOE (%)	*2.8*	*3.2*	*3.5*	*3.2*	*3.9*	*3.9*

Source: compiled by Sessa Partners from TANSHIN financial statements

Systems Integrators (SI) focused on Financial Systems

Code	Name	Mkt cap
4307	NRI	1,813.4
9613	NTT DATA	1,695.6
9719	SCSK Corp.	590.7
3626	TIS	559.4
8056	Nihon Unisys	327.3
9759	NSD	172.5
4847	**IWI**	**20.6**

Source: KABUTAN screening 8/27.

1. Overview of IWI's business and track record in FEP

IWI's corporate group consists of the company (reporting entity 4847), the parent Dai Nippon Printing (7912), and one affiliate, ODN Solution (Okinawa software outsourcing partner). IWI's business consists of two reporting segments: Financial Systems Solutions and Product Solutions. As can be seen from the Earnings at a Glance table on P2, over the last 5 years, Financial Systems Solutions accounted for 89% of revenue, and effectively 100% of profit.

As can be seen in the table at the left, IWI belongs in the sector of systems integrators (SI) focused on financial systems, providing specific application solutions including a combination of software and hardware. **Despite its small size, IWI's main business in Financial Systems Solutions generates above-average profitability including EBITDA margin of 13-15%, and OPM of 8-10%.** IWI's specialty is in developing FEP (front-end processor) systems for credit card companies, specifically on-premise infrastructure in the form of authorization center connection packages. Sessa Partners estimates IWI has a 70-80% overwhelming share in this market. It does not have business with JCB, which was founded in 1961 as an affiliate of Sanwa Bank. FEP business for JCB is handled by TIS (3626), which was also part of the Sanwa Bank Group.

IWI was founded in Dec-1984 for the purpose of importing, exporting, and sales of computer equipment, development of computer software, and associated consulting services. At that time, Founder Kazuhiko Adachi was president of Tandem Computers Japan. Founded in 1974 in Cupertino California, Tandem Computers, Inc. was the leading manufacturer of fault-tolerant computer systems for ATM networks, banks, stock exchanges, and other similar commercial transaction processing applications requiring maximum uptime and zero data loss. It became part of the server division within Compaq in 1997, and it is now part of the server division of Hewlett Packard Enterprise (HPE).

Tandem's NonStop systems use a number of independent identical processors and redundant storage devices and controllers to provide automatic high-speed 'failover' in the case of a hardware or software failure. Then in 1980, Stratus Computer, Inc. (now Stratus Technologies, Inc.) emerged as a competitor to Tandem in fault tolerant computer servers and software with its proprietary Stratus VOS (Virtual Operating System). VOS is used to support high-volume transaction processing applications which require continuous availability. VOS is notable for being one of the few operating systems which runs on fully lock-stepped hardware. Lockstep systems are fault-tolerant computer systems that run the same set of operations at the same time in parallel. The redundancy (duplication) allows error detection and error correction. Stratus computers were resold worldwide from 1985 to 1993 under the IBM System/88 brand, gaining market share in online payment systems applications.

FEPs are responsible for linking client applications and their associated networks to host computer-based applications, and with the advent of the internet and IP, FEPs perform vital functions linked to transaction switching in mission critical transaction environments such as banking, point-of-sale and security applications. Kazuhiko Adachi recognized the huge potential for applications for online credit card payment transactions of Stratus VOS, and over the last 35 years, IWI has established a dominant position in FEP systems development for most credit card companies in Japan, with the notable exception of JCB. IWI's flagship product Net+1 supports OS for Stratus and HP NonStop KERNEL.



FEP credit card on-premise infrastructure for authorization center connection pkgs



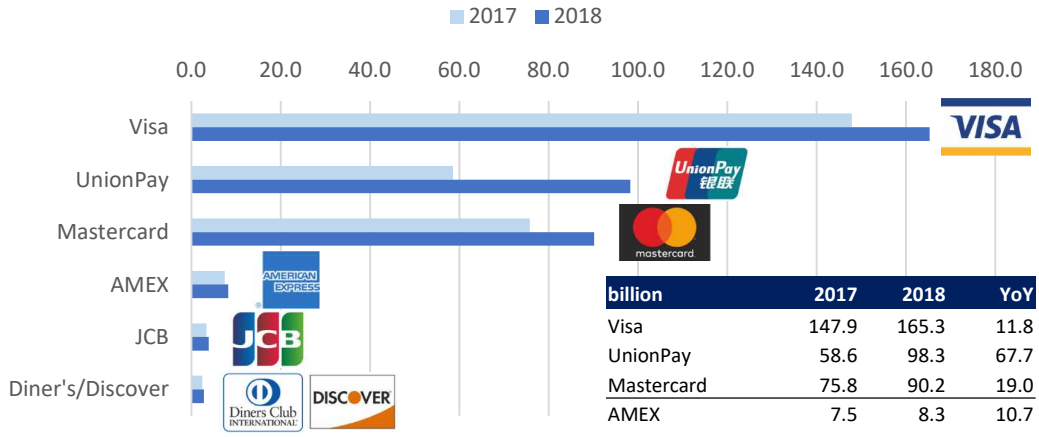
To understand what IWI's FEP systems actually do, it may be useful to review the basic process of online credit card payment authorization. All credit card transactions involve two different banks—one representing the cardholder, known as the **issuing bank**, and one representing the merchant, called the **acquiring bank**. The acquiring bank maintains the merchant's bank account. The contract with the acquirer enables merchants to process credit and debit card transactions. The acquiring bank passes the merchant's transactions along to the applicable issuing banks to receive payment. The issuing bank issues credit cards to consumers on behalf of the card networks (Visa, MasterCard etc.). The issuer acts as the middle-man for the consumer and the card network by contracting with the cardholders for the terms of the repayment of transactions. The following table illustrates a typical payment authorization process.

Typical credit card payment authorization process (many steps in just seconds)

1. **Cardholder:** Makes a request for a purchase from the merchant, enters and authorizes cardholder information to initiate the transaction
2. **Payment Gateway:** Forwards transaction information directly from cardholder's web browser to payment processor
3. **Processor:** Serves as a facilitator on behalf of the acquirer, forwards transaction information from the payment gateway to the card network
4. **Card Network:** Routes the transaction information to the correct issuing bank in order to receive the bank's authorization
5. **Issuer:** Receives and verifies the transaction information; if the credit or debit is available, the issuer sends an authorization code for the transaction back to the card network
6. **Card Network:** Receives the authorization approval from the issuing bank, then forwards the authorization to the processor
7. **Processor:** Receives the issuer's authorization approval from the card network, then forwards that information to the payment gateway
8. **Payment Gateway:** Receives the issuer's authorization approval from the processor, forwards it to the merchant to complete the transaction
9. **Merchant:** Receives the authorization, fulfills the order, and batches the transaction information along with the rest of the day's sales
10. **Acquirer:** Receives the batched transactions at the end of the day, then deposits an amount into the merchant's account equal to the total of the batch, minus applicable fees

Source: Payment Dispute Standards & Compliance Council

Number of purchase transactions (billion) by credit card networks (global brands)



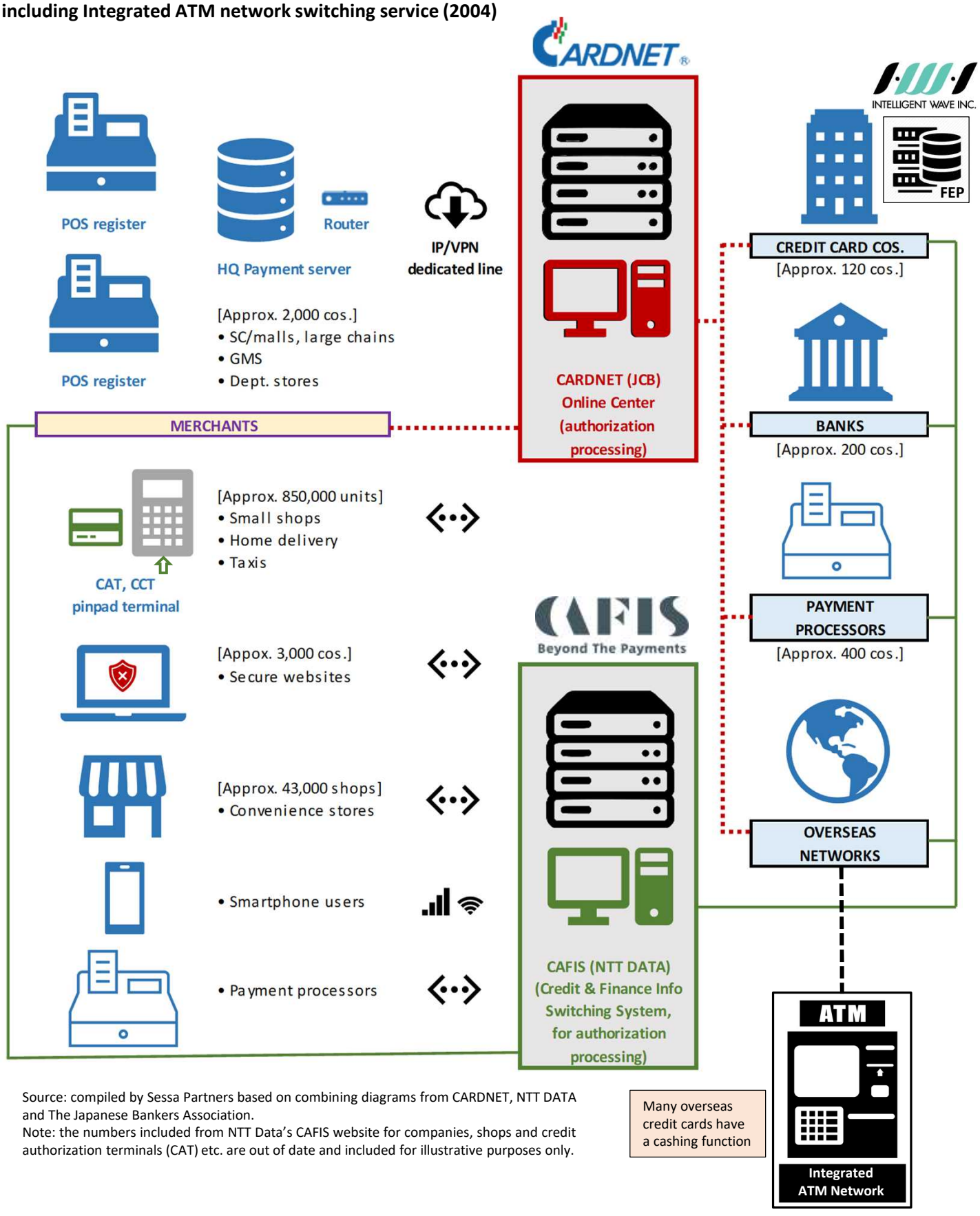
billion	2017	2018	YoY
Visa	147.9	165.3	11.8
UnionPay	58.6	98.3	67.7
Mastercard	75.8	90.2	19.0
AMEX	7.5	8.3	10.7
JCB	3.4	3.9	14.7
Diner's/Discover	2.5	2.8	12.0
Top 6 total	**295.7**	**368.8**	**24.7**

Source: compiled by Sessa Partners from data by The Nilson Report

Credit Card Networks
Credit card networks (global brands Visa, Mastercard, etc.) process transactions between merchants and issuers. Their purpose is to control where credit cards can be accepted and to facilitate transactions between merchants and card issuers.

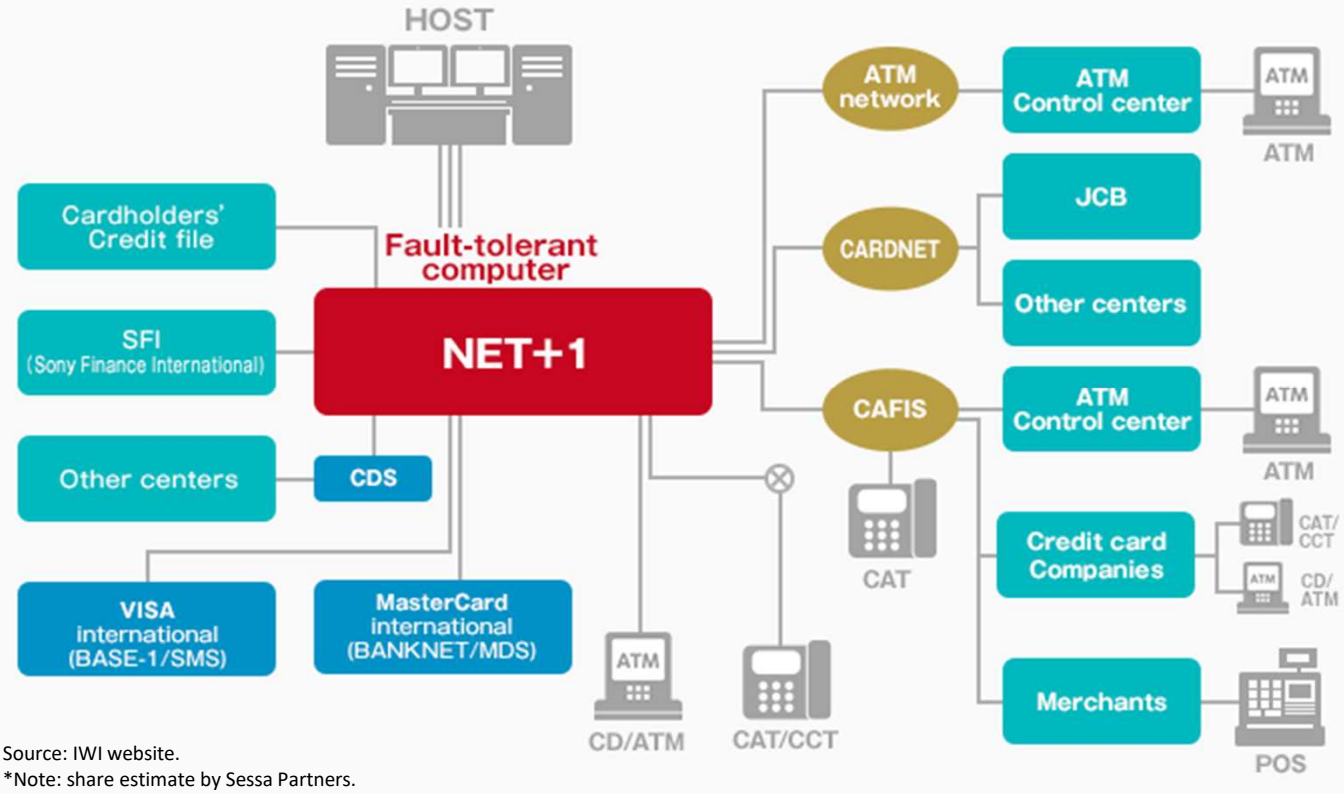
Credit Card Issuers
Financial institutions like banks and consumer finance companies issue credit cards to users. Their purpose is to provide the financial backing for cards, and to establish the terms of transaction settlement, including interest rates and various fees.

Overview of Japan's two real-time 24/7 cashless payment platforms: CARDNET (1995) and CAFIS (1984), including Integrated ATM network switching service (2004)



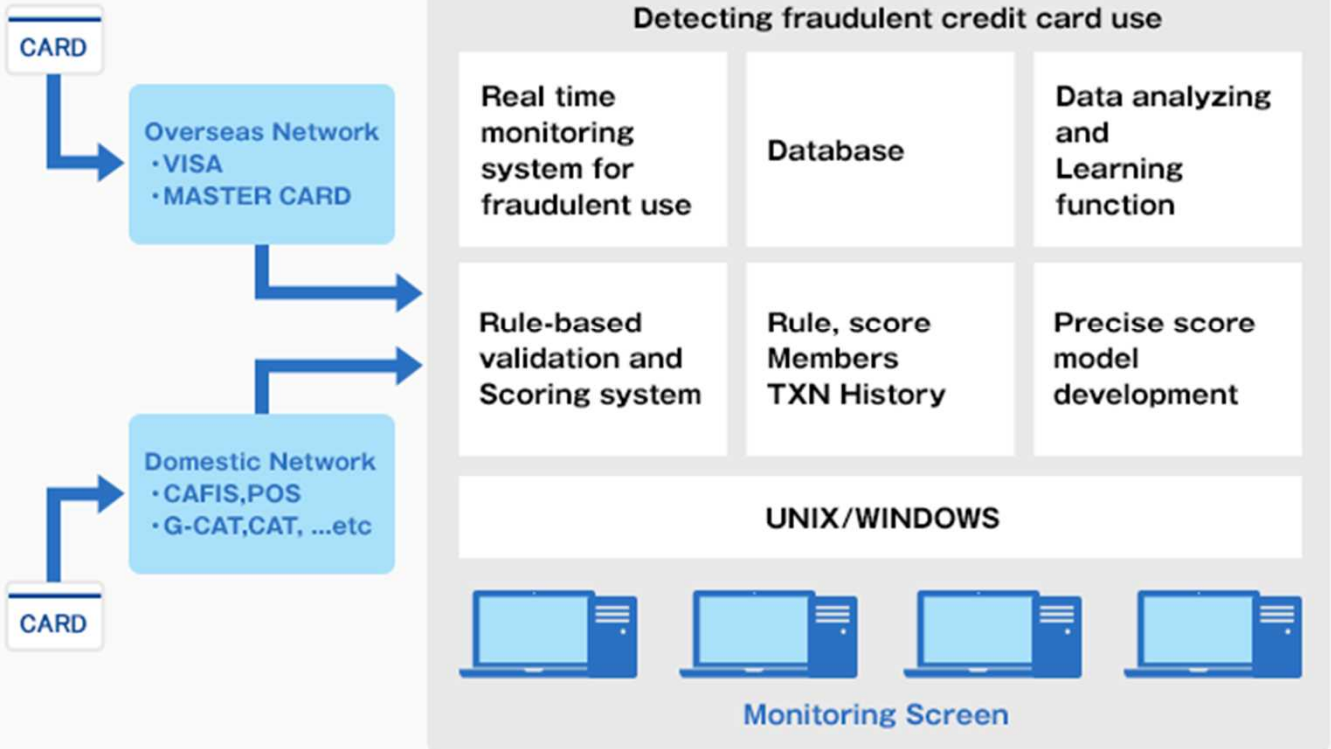
Source: compiled by Sessa Partners based on combining diagrams from CARDNET, NTT DATA and The Japanese Bankers Association.
Note: the numbers included from NTT Data's CAFIS website for companies, shops and credit authorization terminals (CAT) etc. are out of date and included for illustrative purposes only.

IWI's NET+1: de facto standard authorization center connection package with overwhelming 70%+* market share

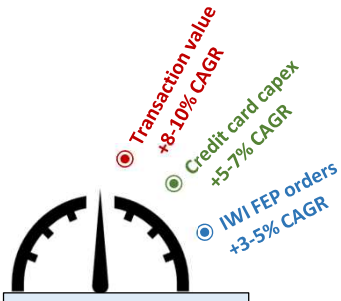


Source: IWI website.
*Note: share estimate by Sessa Partners.

◉ **Mitigates damages from fraudulent credit card use**



Source: IWI website.



Growth Outlook:
The primary driver of FEP orders is credit card capex

Source: IR handout material
Note: growth ests. added by Sessa Partners

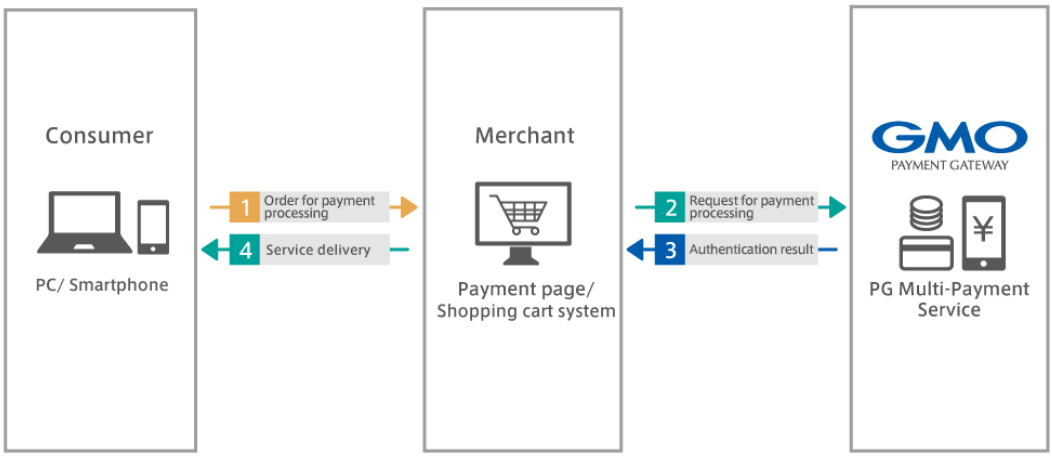
The diagram on P6 gives a comprehensive general overview of the three main network platforms involved in credit card payment transactions: NTT DATA's CAFIS (Credit and Finance Information Switching System, 1984), JCB's CARDNET (1995), and NTT DATA's Integrated ATM Network switching service (2004). Note that IWI's FEP is on-premise systems infrastructure of the credit card companies (upper right-hand corner). The same three network platforms are also displayed in the upper diagram on P7 showing IWI's flagship product Net+1 (authorization center connection package) as the three gold circles. The lower diagram explains functionality of its ACE Plus for detecting fraudulent credit card use, which can be viewed as an optional service for Net+1.

As mentioned earlier, Sessa Partners estimates IWI has a 70-80% overwhelming share in this market. We examine the growth opportunity from developing cloud service versions of this technology, targeting other institutions such as regional banks, later in this report in the section about the MTP. In answer to our key question no.1, we have outlined the history of how the company was able to capture such a high market share, which has important implications such as high barriers to entry due to the installed base, as well as being a relatively small niche market that is not worth the investment cost of a major player trying to enter. According to the company, FEP systems are replaced every 5-6 years, so there is also a clear element of recurring stock business, providing medium-term stability.

Regarding the business opportunity from structural growth in the credit card industry, IR handout materials provide a useful way to characterize the growth outlook, as shown in the graphic on the left. To be clear, there is no direct benefit to an SI firm like IWI from high structural growth in credit card transaction value. However, the fact that credit card business is a growth business is supporting +5-7% CAGR for credit card capex. **Credit card capex is the primary driver for FEP orders for IWI.**

It is also worth noting that there appears to be confusion among some investors on whether GMO Payment Gateway (3769) is a competitor. The answer is no, GMO PG is completely different business, with a completely different customer base. GMO PG's main business is agency payment processing service on behalf of e-commerce merchants, as shown in the diagram below. IWI's customer base and main business is credit card company FEP systems development, maintenance and upgrades.

GMO Payment Gateway: Agency Payment Processing Service on behalf of Merchants



Source: GMO PG website

2. Japan's credit card industry & structural growth drivers

The key takeaway from the data below is that Japan's credit card industry, IWI's core customer base, is currently enjoying robust structural growth, which as mentioned earlier, is driving steady growth in credit card capex, which in turn supports stable FEP systems development order growth for IWI. The bottom table below shows representative credit card issuers by sector, with many being IWI customers.

Credit card business is growth business



Credit Card Service Industry: Transaction Value (¥ bn)

JPY bn	Transaction Value	YoY	Banks	YoY	Consumer Finance	YoY	Commerce	YoY	Others	YoY
FY3/99	19,145		8,388		4,122		4,940		1,695	
FY3/00	20,420	6.7	8,830	5.3	4,446	7.9	5,337	8.0	1,806	6.6
FY3/01	21,906	7.3	9,402	6.5	4,645	4.5	5,896	10.5	1,964	8.7
FY3/02	22,938	4.7	9,713	3.3	4,950	6.6	6,243	5.9	2,032	3.5
FY3/03	24,405	6.4	10,408	7.2	4,982	0.6	6,853	9.8	2,163	6.4
FY3/04	25,579	4.8	10,941	5.1	5,246	5.3	7,134	4.1	2,257	4.4
FY3/05	27,641	8.1	11,891	8.7	5,640	7.5	7,540	5.7	2,571	13.9
FY3/06	30,647	10.9	14,286	20.1	5,012	(11.1)	8,432	11.8	2,917	13.5
FY3/07	33,330	8.8	15,821	10.7	4,318	(13.9)	10,030	18.9	3,162	8.4
FY3/08	34,056	2.2	15,243	(3.7)	4,551	5.4	10,837	8.0	3,425	8.3
FY3/09	34,960	2.7	15,470	1.5	4,643	2.0	11,222	3.6	3,624	5.8
FY3/10	34,109	(2.4)	14,744	(4.7)	3,868	(16.7)	11,882	5.9	3,616	(0.2)
FY3/11	34,142	0.1	14,743	(0.0)	3,958	2.3	12,192	2.6	3,248	(10.2)
FY3/12	35,358	3.6	15,169	2.9	4,349	9.9	12,652	3.8	3,188	(1.8)
FY3/13	37,671	6.5	15,837	4.4	4,965	14.2	13,437	6.2	3,432	7.6
FY3/14	41,615	10.5	17,148	8.3	6,095	22.8	14,615	8.8	3,757	9.5
FY3/15	44,614	7.2	18,294	6.7	7,027	15.3	15,284	4.6	4,009	6.7
FY3/16	47,439	6.3	19,182	4.9	8,176	16.4	15,957	4.4	4,123	2.9
FY3/17	50,679	6.8	20,171	5.2	9,644	18.0	16,585	3.9	4,279	3.8
FY3/18	55,158	8.8	21,844	8.3	11,388	18.1	17,340	4.6	4,585	7.2
FY3/19	60,151	9.1	23,750	8.7	13,513	18.7	17,998	3.8	4,890	6.7
FY3/20	66,190	10.0	25,648	8.0	16,654	23.2	18,813	4.5	5,076	3.8

Source: Survey on Trends in Specified Service Industries, Ministry of Economy, Trade and Industry (METI)

Representative Credit Card Issuers in Japan by Sector

Banks	Mitsubishi UFJ NICOS Co.,Ltd. Sumitomo Mitsui Card Co., Ltd.
Retail	Credit Saison Co., Ltd. AEON Credit Service Co, Ltd. MICARD Co., LTD (Mitsukoshi Isetan) Rakuten Card Co., Ltd. YJ Card Corporation (Yahoo! Japan) Pocket Card Co., Ltd. Seven Card Service Co., Ltd
Consumer Finance	Orient Corporation APLUS FINANCIAL CO., LTD Life Card Co., Ltd. JACCS CO., LTD.
Commerce	Toyota Finance d Card (NTT DoCoMo) JALCARD Viewcard Co., Ltd. (JR East)

Source: compiled by Sessa Partners



Japan's goal to raise cashless payments to 40% by 2025

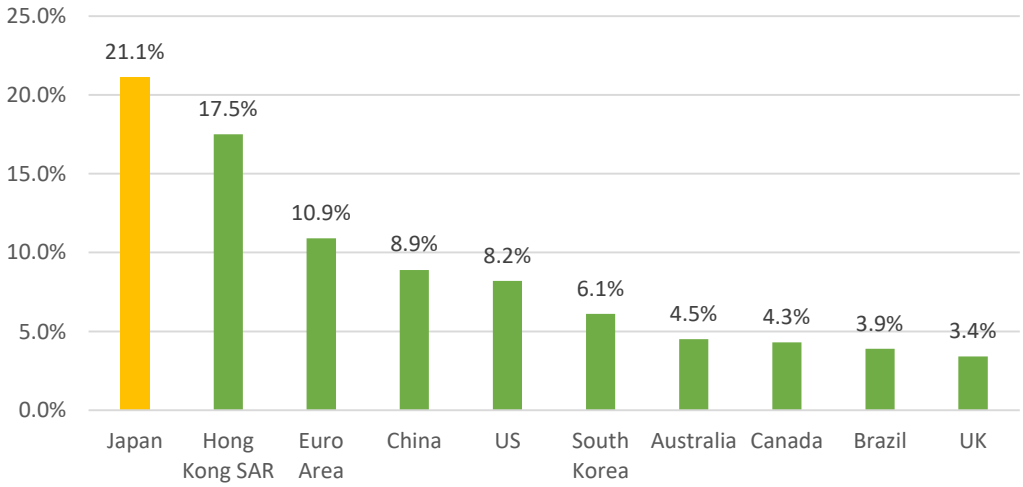
The Cabinet Secretariat announced "Future Investment Strategy 2017" in June-2017, and the Ministry of Economy, Trade and Industry announced "Cashless Vision" in April-2018. Cashless Vision set a goal of raising the cashless payment ratio to 40% by 2025 when the Japan International Expo (Osaka – Kansai Expo) will be held, and in the future target 80%. Promotion of cashless payment not only raises convenience for consumers, but it also address issues like the chronic labor shortage from the declining birthrate and aging society, improves productivity of SMEs, and helps to revitalize rural areas. Japan has a well-developed credit card industry, enjoying structural growth drivers including government policy targeting a higher cashless ratio. At the moment, South Korea and China are leading Asia through aggressive adoption of cashless technologies.

Japan is still a highly cash-based society.



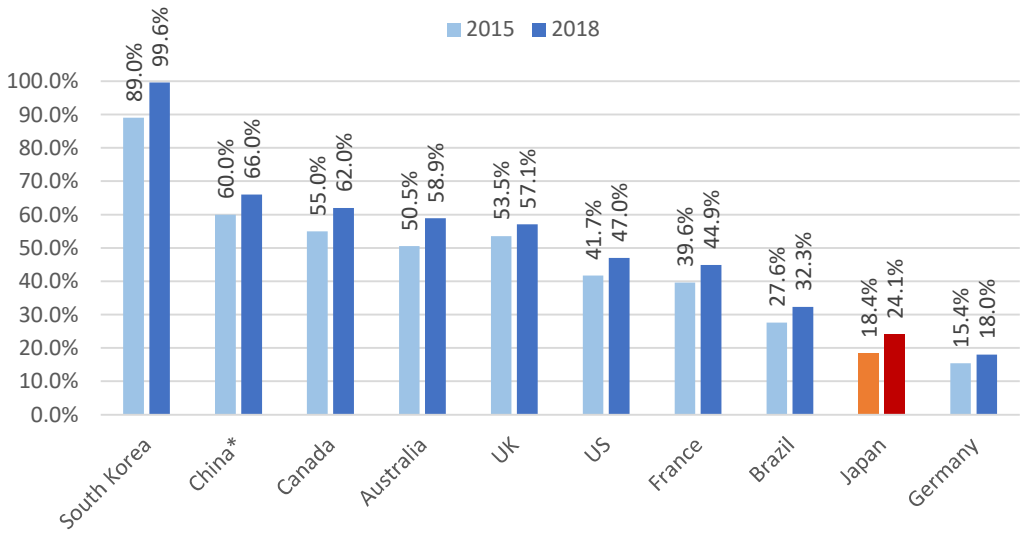
Source: BOJ

Banknotes and coins in circulation: value as a percentage of GDP (%)



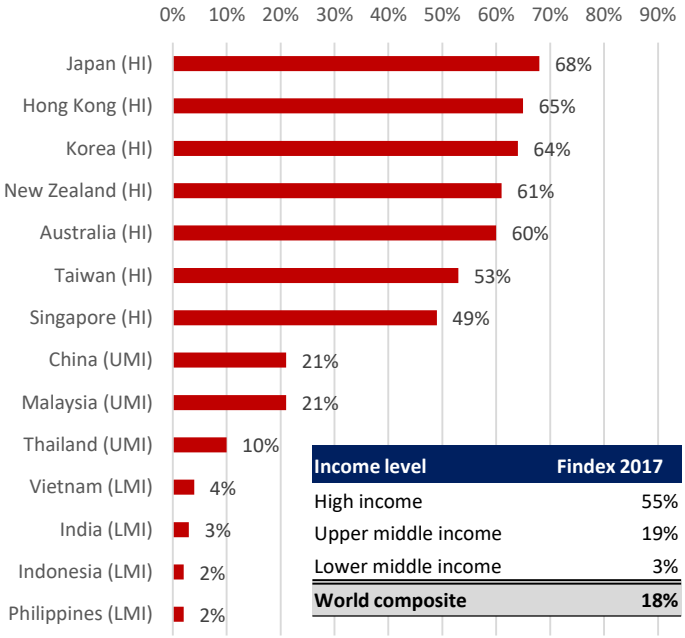
Source: Bank for International Settlements, BIS Statistics Explorer - Payments and financial market infrastructures

Cashless payments as a percentage of household final consumption expenditure



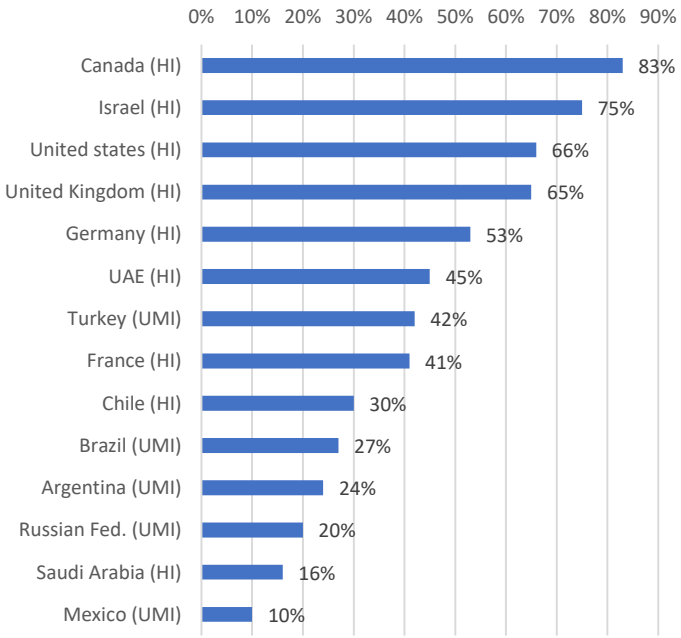
Source: Bank for International Settlements, BIS Statistics Explorer - Payments and financial market infrastructures, World Bank national accounts data. *Note, China figures are included for reference only from an April-2017 case study by the UN's Better Than Cash Alliance on high growth in digital payment ecosystems in China.

Credit Card Ownership (% age 15+): Asia Pacific



Income level	Findex 2017
High income	55%
Upper middle income	19%
Lower middle income	3%
World composite	**18%**

Credit Card Ownership (% age 15+): Americas, Europe, ME

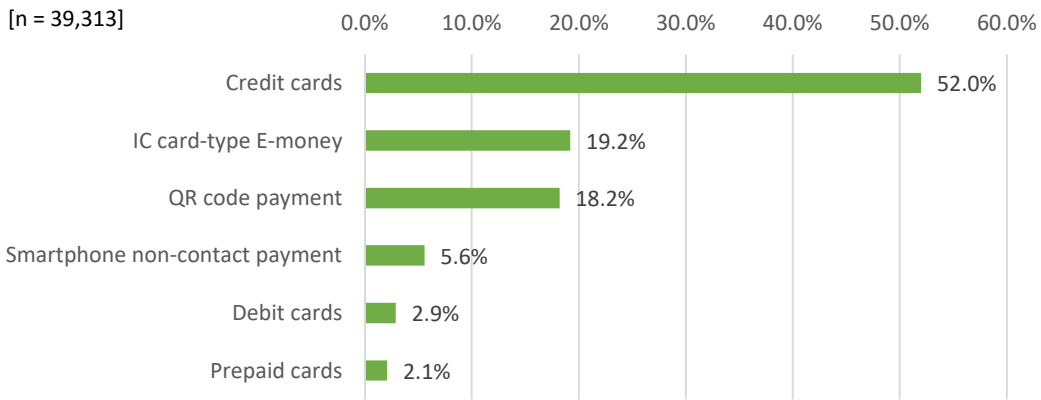


Source: compiled by Sessa Partners from The World Bank Global Findex Database 2017
Note: The Global Findex database is the world's most comprehensive data set on how adults save, borrow, make payments, and manage risk. Launched with funding from the Bill & Melinda Gates Foundation, the database has been published every three years since 2011. The data are collected in partnership with Gallup, Inc. The 2017 edition includes new data on the use of fintech, including the use of mobile phones and the internet to conduct financial transactions.

Credit cards are the biggest beneficiary of 'cashless'

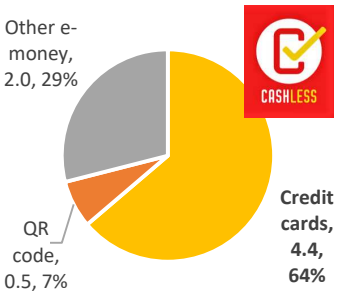
MMD (mobile marketing data) Labs collaborated with VISA Worldwide Japan in conducting a survey regarding the government's Cashless Point Rebate Program from October 1, 2019 – June 30, 2020. The survey targeted 50,000 valid respondents living in Japan between the ages of 20 – 69, during the period from December 13 through December 22, 2019. While the stock market often tends to find the array of new fintech payment technologies as more 'sexy', the response of actual users of the Cashless Point Rebate Program overwhelming used credit cards as the preferred cashless payment method, citing a high level of trust, overall convenience and enhanced point systems.

Which cashless payment method did you use most often over the last one month?



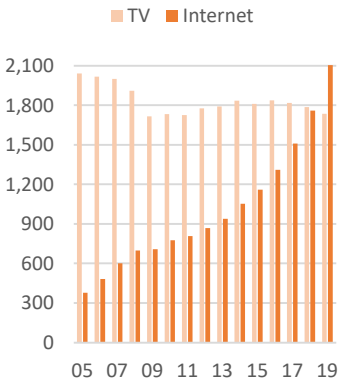
Source: Survey of Actual Users of the Cashless Point Rebate Program for Consumers, MMD Labs and VISA Worldwide Japan, January 20, 2020

Breakdown of ¥6.9trn target payments of METI's Cashless Point Rebate Program by payment method (JPY trillion)



Source: METI

Internet ads of ¥2.1trn surpass TV for the first time in 2019



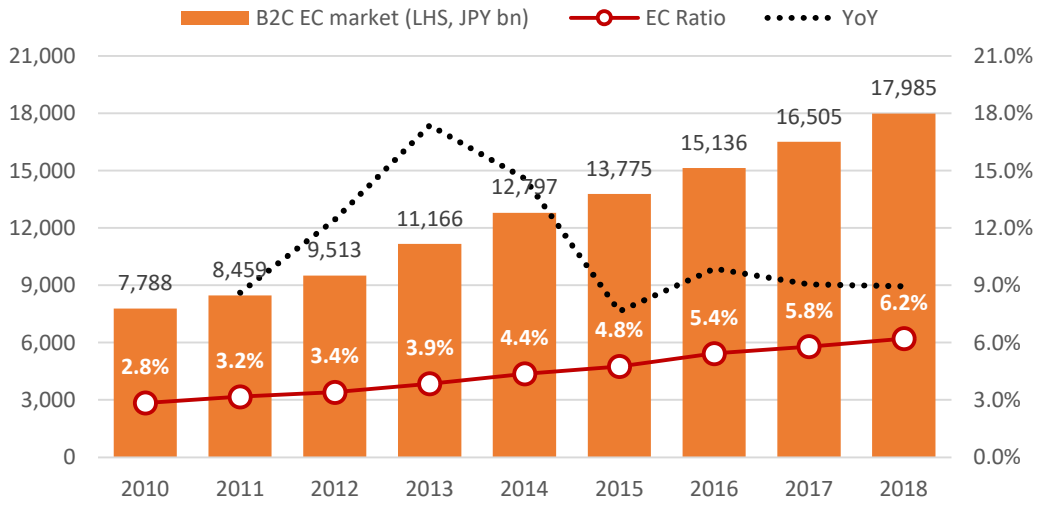
Source: 'Advertising Expenditures in Japan 2019' by DENTSU Inc.



Many Japanese credit card companies are expanding international business in Asia, and benefit from high growth in inbound demand.

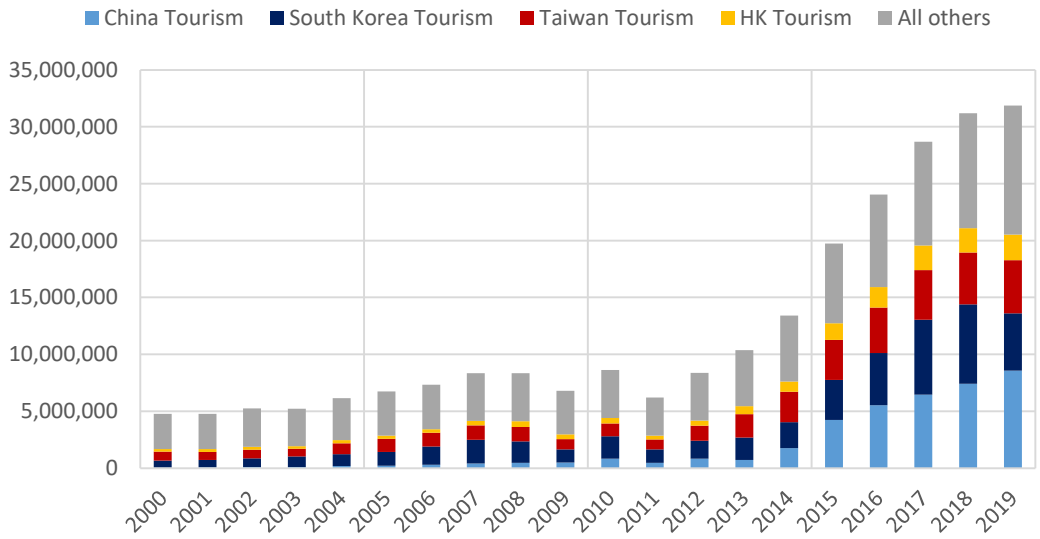
The ongoing shift to e-commerce / online shopping is hardly a new story, but the data shows there are still no signs of this structural growth driver for credit card transaction value abating. The second graph on the left shows that internet ad expenditure in Japan exceeded that of national TV for the first time in 2019. Another structural driver for the credit card industry has been many card companies expanding international business in Asia. The second graph below shows tourist visitors from the top 4 countries grew at +28% CAGR since 2011, +44% for China alone. The outbreak of the coronavirus pandemic since the beginning of 2020 has resulted in a plunge in international travel, however, the long-term outlook for increased foreign visitors is unchanged. In the meantime, coronavirus has created a surge in e-commerce / online shopping, likely mitigating to a certain extent the decline in inbound demand.

Japan's B2C E-commerce Market (JPY bn) and EC Ratio



Source: Ministry of Economy, Trade and Industry (METI) '2018 E-Commerce Market Survey', May 16, 2019

Trend of Visitor Arrivals to Japan: top 4 tourism countries +28% CAGR since 2011



Source: compiled by Sessa Partners from data by Japan National Tourism Organization (JNTO)

3. Benefits of being in the Dai Nippon Printing Group

DNP's own IC card and credit card system solutions business complements and reinforces the company's dominant position in Japan's credit card industry. As can be seen from the table below, DNP consistently ranks as the no.1 or no.2 top client, contributing roughly ¥2.0 billion in annual revenue, a significant contribution for a firm with total revenue of roughly ¥10.0 billion

Trend of Top 3 Customers by Net Sales

	JPY mn	FY6/16	FY6/17	CHG	Main projects
①	DNP	1,326	1,818	492	Smartphone payment
②	System dev. co.	231	822*	591	Credit card brands unification
③	Credit card issuer	461	640	179	Network gateway
					*Incl. direct sales from the credit card co.
	JPY mn	**FY6/17**	**FY6/18**	**CHG**	**Main projects**
①	DNP	1,818	2,115	297	Smartphone payments, payment platforms, security products
②	Credit card issuer	268	1,935	1,667	Credit card brand unification
③	Credit card issuer	377	647	270	Network gateway
	JPY mn	**FY6/18**	**FY6/19**	**CHG**	**Main projects**
①	DNP	2,116	1,952	(164)	Smartphone payments, payment platforms, security products
②	Credit card issuer	406	684	278	FEP, network gateway
③	Credit card issuer	1,935	674	(1,261)	Credit card brand unification
	JPY mn	**FY6/19**	**FY6/20**	**CHG**	**Main projects**
①	DNP	1,952	2,270	318	Smartphone payments, payment platform
②	Credit card issuer	684	832	148	Network gateway
③	System dev. co.	313	740	427	Network gateway

Source: compiled by Sessa Partners from IR results briefing materials

Governance measures to protect minority shareholders

DNP new project terms are constantly reviewed by a board committee to ensure fairness and no conflict of interest is working to the disadvantage of IWI. The table below shows well-balanced growth between total shareholders' equity (5Y CAGR 7.1%) and amount of dividends paid (5Y CAGR 14.9%).

Well-balanced Growth in Shareholders' Equity and Amount Dividends Paid

JPY mn, %	FY6/15 Consol act	FY6/16 Consol act	FY6/17 NC act	FY6/18 NC act	FY6/19 NC act	FY6/20 NC act	5YR CAGR (avg)
DPS (¥)	5.00	6.00	7.00	7.00	9.00	10.00	
Payout ratio (%)	*28.0*	*33.0*	*33.7*	*48.8*	*34.6*	*34.5*	
Total shareholders' equity	4,563	4,910	5,222	5,408	5,908	6,433	7.1%
YoY	*8.1*	*7.6*	*6.4*	*3.6*	*9.2*		
Amount dividends paid	131	158	184	184	236	262	14.9%
YoY	*0.0*	*20.6*	*16.5*	*0.0*	*28.3*	*11.0*	
ROE (%)	10.1	9.7	10.3	6.6	11.3	11.4	9.9
DOE (%)	2.8	3.2	3.5	3.2	3.9	3.9	3.5
• difference	7.3	6.5	6.8	3.4	7.4	7.5	6.3

Source: compiled by Sessa Partners from TANSHIN financial statements

Major Shareholders

As of December 31,2019

Name of shareholder	Address	Number of shares held	Ownership percentage to the issued shares (%)
Dai Nippon Printing Co., Ltd.	1-1-1, Ichigaya-Kagacho Shinjuku-ku, Tokyo	13,330,700	50.68
Kazuhiko Adachi	Konan-ku, Yokohama Kanagawa pref.	2,376,900	9.04
INTELLIGENT WAVE Employee Shareholders Association	1-21-2 Shinkawa Chuo-ku, Tokyo	499,000	1.90
The Master Trust Bank of Japan, Ltd. (Trust Account)	2-11-3 Hamamatsucho, Minato-ku, Tokyo	364,600	1.39
Motoichi Mizota	Chiyoda-ku, Tokyo	301,000	1.14
Japan Trustee Services Bank, Ltd. (Trust Account)	1-8-11 Harumi Chuo-ku, Tokyo	298,100	1.13
BNYM AS AGT/CLTS NON TREATY JASDEC (Standing proxy: MUFG Bank, Ltd.)	225 LIBERTY STREET, NEW YORK, NY 10286, UNITED STATES (2-7-1 Marunouchi Chiyoda-ku, Tokyo)	217,077	0.83
Hideki Nishino	Midori-ku, Yokohama Kanagawa pref.	209,000	0.79
MUFG Bank, Ltd.	2-7-1 Marunouchi Chiyoda-ku, Tokyo	200,000	0.76
Hirotsugu Kobayashi	Yachiyo Chiba pref.	191,600	0.73
Total	—	17,987,977	68.38

Source: 1H FY6/20 YUHO

Shareholder Breakdown by Investor Type

(As of June 30, 2020)

Established	December 27, 1984
Location	Kayabacho Tower, 1-21-2 Shinkawa, Chuo-ku, Tokyo
Employees	435
Parent company	Dai Nippon Printing Co., Ltd. (50.61%)
Capital stock	JPY843.75mn
Shares outstanding	26,340,000
Shareholders	10,738

	Ownership (%)
Individuals, others	36.61%
Japanese financial institutions	6.61%
Other Japanese corporations	51.07%
Foreign corporations	4.84%
Japanese securities firms	0.71%
Treasury stock	0.16%

	% of shareholders
Individuals, others	98.54%
Japanese financial institutions	0.14%
Other Japanese corporations	0.41%
Foreign corporations	0.65%
Japanese securities firms	0.25%
Treasury stock	0.01%

Source: FY6/20 IR results briefing materials

4. Earnings analysis, change in reporting segments

FY6/20 Financial Results

Relative to initial guidance for net sales of ¥10,600mn (+1.5% YoY) and OP of ¥1,000mn (+8.5% YoY), actual results came in ahead with net sales of ¥10,920mn (+4.6% YoY) and OP of ¥1,036mn (+12.5% YoY). OP exceeded ¥1.0bn for the 1st time since FY6/06. The company hiked the dividend from the indicated ¥9 → ¥10. Regarding the impact of COVID-19, in general, development work has continued unaffected as a system was put in place so that all employees can telework from home. However, an expected 4Q order for in-house developed CWAT was postponed and later cancelled.

IWI Semiannual Earnings Trend

[J-GAAP] JPY mn, %	Net Sales	YoY	Oper Profit	YoY	OPM	Ord Profit	YoY	Net Income	YoY
19.6 H1 CE	4,700	0.2	320	68.3	6.8%	330	67.5	230	77.9
19.6 H2 CE	6,000	1.5	560	56.6	9.3%	570	51.3	390	57.1
19.6 FY CE	10,700	0.9	880	60.7	8.2%	900	56.9	620	64.3
19.6 H1	5,039	7.4	269	41.5	5.3%	282	43.0	205	58.4
19.6 H2	5,404	(8.6)	653	82.5	12.1%	672	78.4	479	93.0
19.6 FY	10,443	(1.5)	922	68.3	8.8%	954	66.2	684	81.2
20.6 H1 CE	5,000	(0.8)	340	26.4	6.8%	360	27.8	250	22.1
20.6 H2 CE	5,600	3.6	660	1.1	11.8%	680	1.2	470	(1.9)
20.6 FY CE	10,600	1.5	1,000	8.5	9.4%	1,040	9.1	720	5.3
20.6 H1	4,967	(1.4)	369	37.1	7.4%	360	27.8	237	15.8
20.6 H2	5,954	10.2	668	2.3	11.2%	715	6.4	525	9.6
20.6 FY	10,921	4.6	1,036	12.5	9.5%	1,075	12.7	762	11.4
21.6 H1 CE	5,000	0.7	380	3.0	7.6%	400	11.1	280	18.1
21.6 H2 CE	6,000	0.8	770	15.3	12.8%	790	10.5	540	2.9
21.6 FY CE	11,000	0.7	1,150	11.0	10.5%	1,190	10.7	820	7.6

Source: compiled by Sessa Partners from TANSHIN Financial Statements

Net Sales by Product/Service Categories

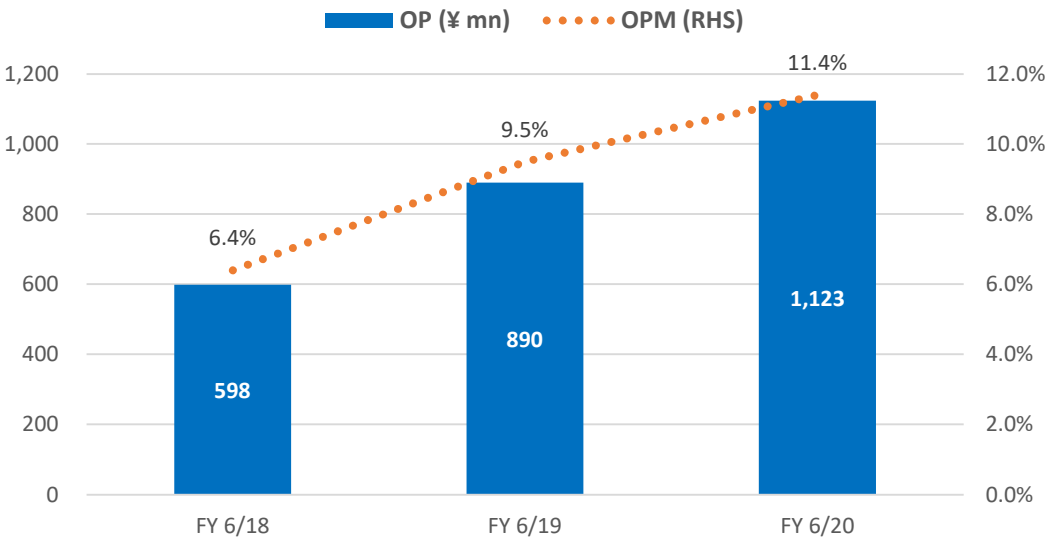
[J-GAAP] JPY mn, %	FY6/19 act	FY6/20 init CE	FY6/20 act	AMT CHG	YoY	FY6/21 init CE	AMT CHG	YoY
Net sales	**10,443**	**10,600**	**10,920**	**477**	**4.6**	**11,000**	**80**	**0.7**
YoY	(1.5)	1.5	4.6			0.7		
by reporting segment								
Financial Systems Solutions*	**9,336**	**9,400**	**9,857**	**521**	**5.6**	**9,900**	**43**	**0.4**
• Software development	5,668	5,960	5,791	123	2.2	5,362	(429)	(7.4)
• Software maintenance	1,124	1,220	1,246	122	10.9	1,284	38	3.0
• Hardware	1,140	870	1,526	386	33.9	1,494	(32)	(2.1)
• In-house package software	512	240	244	(268)	(52.3)	397	153	62.7
• Cloud service	637	800	828	191	30.0	940	112	13.5
• 3rd party package software	254	310	220	(34)	(13.4)	423	203	92.3
Product Solutions*	**1,106**	**1,200**	**1,063**	**(43)**	**(3.9)**	**1,100**	**37**	**3.5**
• Software development	72	60	53	(19)	(26.4)			
• Software maintenance	282	290	276	(6)	(2.1)			
• Hardware	82	40	44	(38)	(46.3)			
• In-house package software	133	80	89	(44)	(33.1)			
• 3rd party package software	534	730	600	66	12.4			

Source: compiled by Sessa Partners from results briefing materials.
*Note: reporting segments are changing to one single segment from FY6/21. Product Solutions sales become a new category called • Security products (please refer to the table on P2).

Financial Systems Solutions
As can be seen from the table on the bottom of P15, the drivers of net sales were hardware (+33.9%) and cloud services (+30.0%), which offset the decline in in-house package software.

Following the +48.8% increase in FY6/19, segment OP again posted high double-digit growth of +26.2% in FY6/20. Despite lower sales of high-margin in-house package software, increased sales of hardware and improved profitability of software development and cloud services contributed.

Financial Systems Solutions OP Trend



Source: compiled by Sessa Partners from IR results briefing materials

Product Solutions
As can be seen from the table on the bottom of P15, while sales of third-party package software managed a YoY gain, it was still a large shortfall to plan, and more importantly, sales of high-margin in-house package software CWAT declined -33.1% YoY, resulting in the segment again posting an operating loss.

Product Solutions Net Sales Trend

	FY06/19	FY06/20	Change
Net sales	1,106	1,063	(43)
In-house products CWAT	488	418	(70)
Third-party products Traps illusive ayehu MORPHISEC Moving Target Defense	617	644	27
Operating income (loss)	31	(87)	(118)

Source: IR results briefing materials

FY6/21 Outlook

As can be seen from the table on the bottom of P15, system development sales are expected to decline with no large-scale projects currently under development, but income is expected to be relatively stable. Conversely, high-margin in-house package software is expected to recover sharply on the back of a number of FEP upgrade projects. Hardware sales are expected to remain flat at a high level on the aforementioned FEP upgrade projects. Cloud service sales are expected to continue growing on 3 new expected contracts, however the company assumes no new IOASIS customers this term due to COVID-19. Also, profitability will temporarily deteriorate due to upfront leading investment costs, pushing back turning profitable to FY6/22.

One encouraging development is the company is changing reporting segments this term temporarily as it reviews turning around the low profitability of security software products. Just eliminating red ink would have a large impact on the road to 15% OPM.

5. Growth Initiatives in the MTP

For mainstay Financial Systems Solutions Business, the three main growth initiatives are: ① **expand existing domains**, including FEP system upgrades (new development projects, hardware upgrades), smartphone payments, fraud detection, disaster recovery, ② **sharply boost sales of cloud services** aimed at migrating to a recurring revenue model targeting regional banks, and ③ **launch new products**, including next-generation Net+1 (provide diverse network connections in addition to card payments, system upgrades for existing customers and new demand from new entrants, expand into new domains outside of finance), and next-generation fraud detection (respond to growing e-commerce payments, leverage AI to boost capacity and detection accuracy, proof of concept (PoC) projects underway with multiple existing card issuers). New long-term targets include net sales of ¥15.0bn, and OPM of 15%. **The drivers of higher profitability are cloud services turning profitable and improving security software**.

Rolling 3-Year Medium-Term Management Plan (MTP)

2017.08.02 JPY mn, %	FY6/17 act	FY6/18 init CE	FY6/19 MTP	FY6/20 MTP	3Y CAGR
Net sales	8,469	9,000	10,000	10,500	7.4
YoY	17.5	6.3	11.1	5.0	
Financial Systems Solutions	7,447	7,700	8,550	8,900	6.1
Product Solutions	1,022	1,300	1,450	1,600	16.1
Operating profit	702	850	950	1,000	12.5
OPM	*8.3%*	*9.4%*	*9.5%*	*9.5%*	



2018.08.01 JPY mn, %	FY6/18 act	FY6/19 init CE	FY6/20 MTP	FY6/21 MTP	3Y CAGR
Net sales	10,603	10,700	11,000	11,200	1.8
YoY	25.2	0.9	2.8	1.8	
Financial Systems Solutions	9,332	9,300	9,500	9,600	1.0
Product Solutions	1,271	1,400	1,500	1,600	8.0
Operating profit	547	880	930	1,000	22.3
OPM	*5.2%*	*8.2%*	*8.5%*	*8.9%*	

2019.08.07 JPY mn, %	FY6/19 act	FY6/20 init CE	FY6/21 MTP	FY6/22 MTP	3Y CAGR
Net sales	10,443	10,600	11,200	12,000	4.7
YoY	(1.5)	1.5	5.7	7.1	
Financial Systems Solutions	9,336	9,400	9,900	10,600	4.3
Product Solutions	1,106	1,200	1,300	1,400	8.2
Operating profit	921	1,000	1,080	1,200	9.2
OPM	*8.8%*	*9.4%*	*9.6%*	*10.0%*	

2020.08.05 JPY mn, %	FY6/20 act	FY6/21 init CE	FY6/22 MTP	FY6/23 MTP	3Y CAGR
Net sales*	10,920	11,000	12,000	13,500	7.3
YoY	4.6	0.7	9.1	12.5	
Financial Systems Solutions	9,857	9,900			
Product Solutions	1,063	1,100			
Operating profit	1,036	1,150	1,250	1,500	13.1
OPM	*9.5%*	*10.5%*	*10.4%*	*11.1%*	

Source: compiled by Sessa Partners from respective press releases.

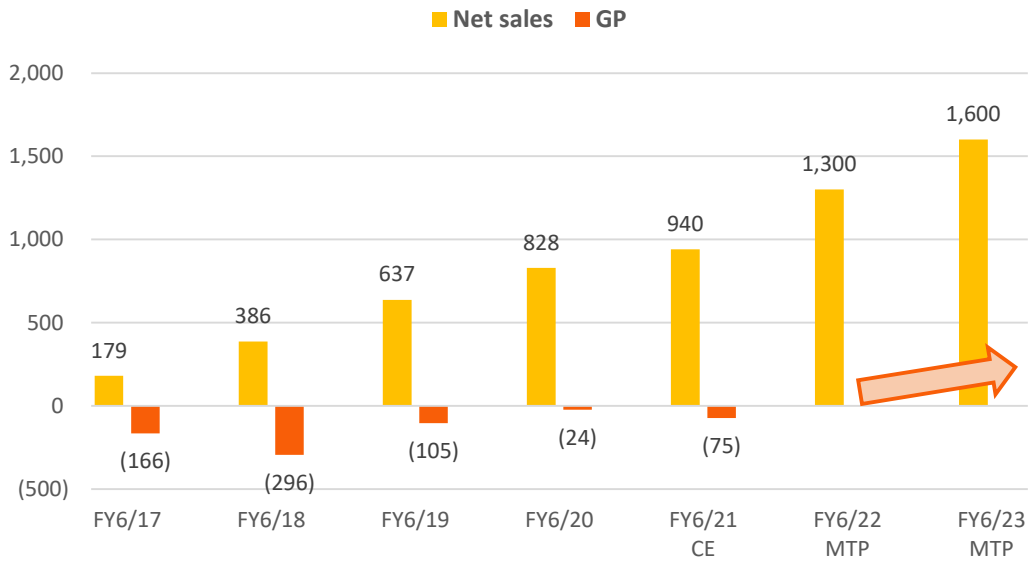
Note: reporting segments change to one single segment from FY6/21. Figures shown in grey are for reference only.

Cloud Services
According to the Japanese Bankers Association (JBA), as of December 2019, there are 64 regional banks, and 39 type-2 regional banks, for a total of 103. IWI identified a major business opportunity here, targeting regional banks considering to become credit card issuers. IWI's IOASIS cloud service to support acquiring merchants is the only one of its kind available.

Given the smaller scale relative to the megabanks, the initial investment burden for installing their own FEP switching system is a potential barrier. By porting IWI's proprietary Net+1 and AcePlus into cloud service solutions, the benefit to the regional bank client is an affordable scheme to lease the service, fixing the running costs including maintenance. **In return, IWI gets a recurring revenue stream that is scalable.**

Cloud Service	Functionality
IOASIS:	Merchant acquiring
IFINDS:	Fraud detection
IGATES:	Switching, gateway
IPRETS:	Point rebate system

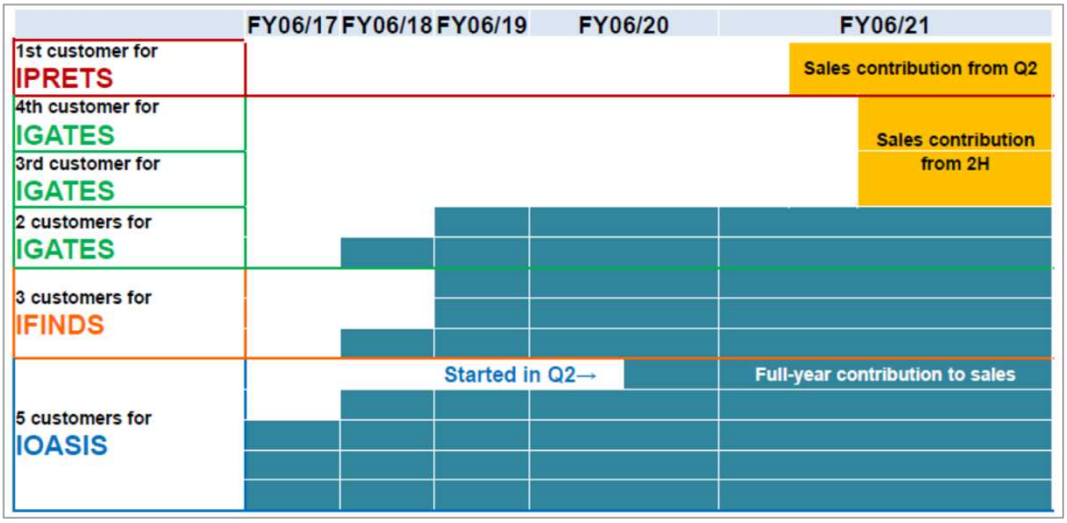
Sharply boost sales of cloud services, turn OP profitable from FY6/22 (JPY mn)



Source: compiled by Sessa Partners from IR results briefing materials

FY6/21: Upfront investment results in higher costs, expecting 3 new clients

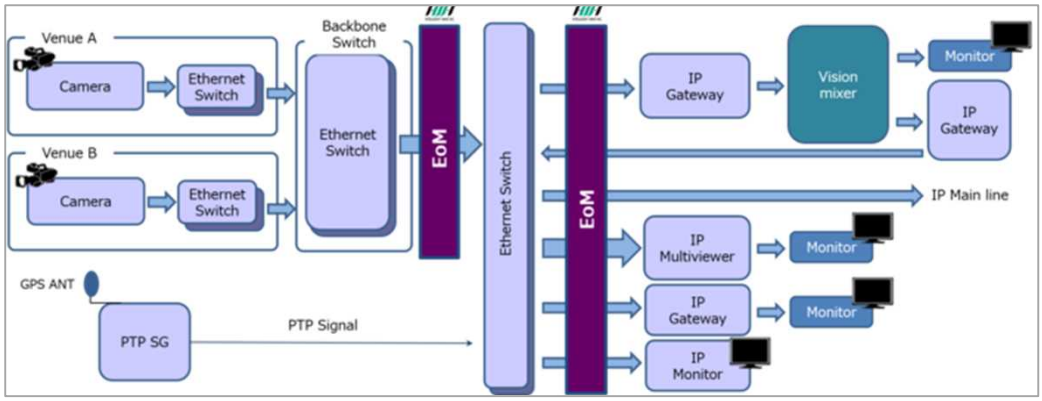
		FY06/17 actual	FY06/18 actual	FY06/19 actual	FY06/20 actual	FY06/21 forecast
Net sales		179	386	637	828	940
Gross profit (loss)		(166)	(296)	(105)	(24)	(75)
Services and customers	IPRETS	0	0	0	0	1
	IGATES	0	1	2	2	4
	IFINDS	0	1	3	3	3
	IOASIS	3	4	4	5	5



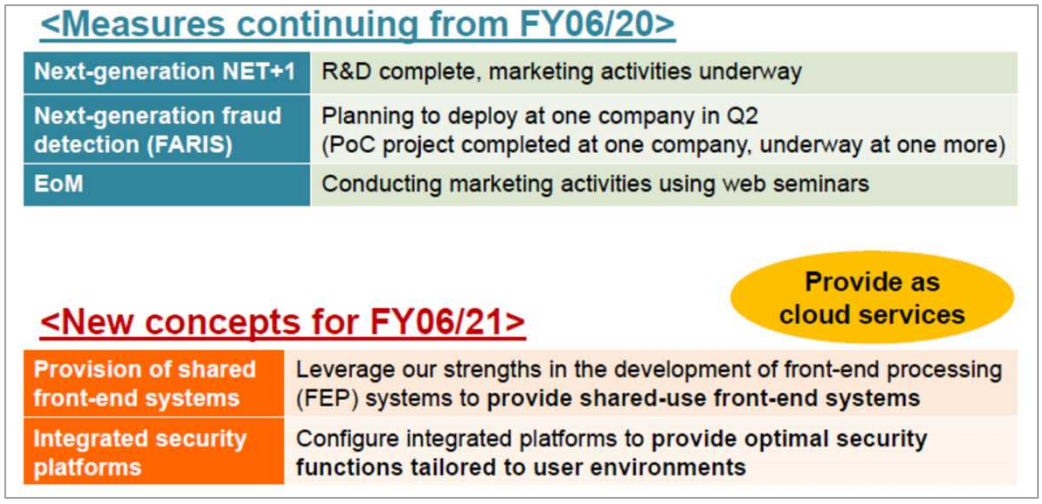
Source: IR results briefing materials

EoM IP Flow Monitoring Solution for Broadcasting

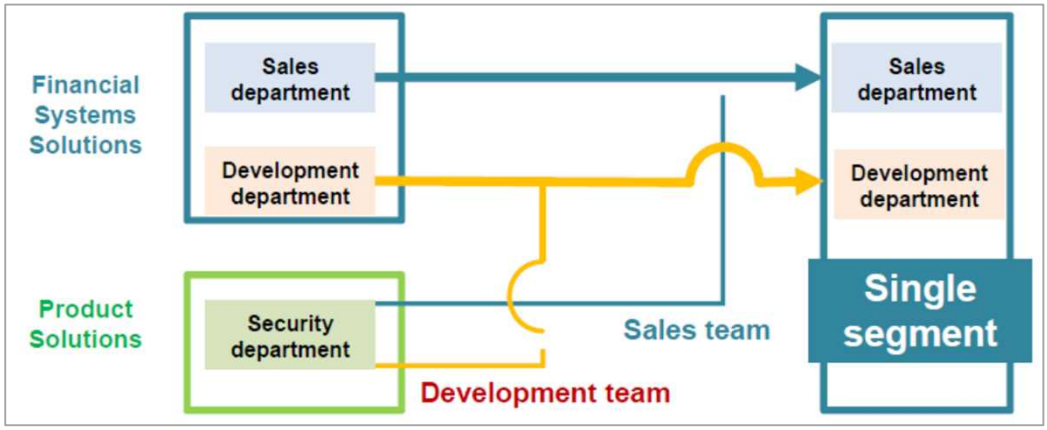
In addition to cloud services, another promising new business area for the company is leveraging its experience and know-how in FPGA's (Field Programmable Gate Arrays) to develop an EoM hardware/software solution for **broadcasting**. A big shift towards IP transmission is taking place as transferred data gets bigger with the spread of 4K/8K broadcasting. EoM monitors latency, jitter and packet drop rate to preserve broadcast data quality. This uses a low latency L1 switch with FPGA made by Arista Networks.



Accelerate investment in new businesses



Change reporting segments to one single segment this term, review what is necessary to eliminate losses in security software products, and to achieve optimal resource allocation etc. Expect more details by 1H results.



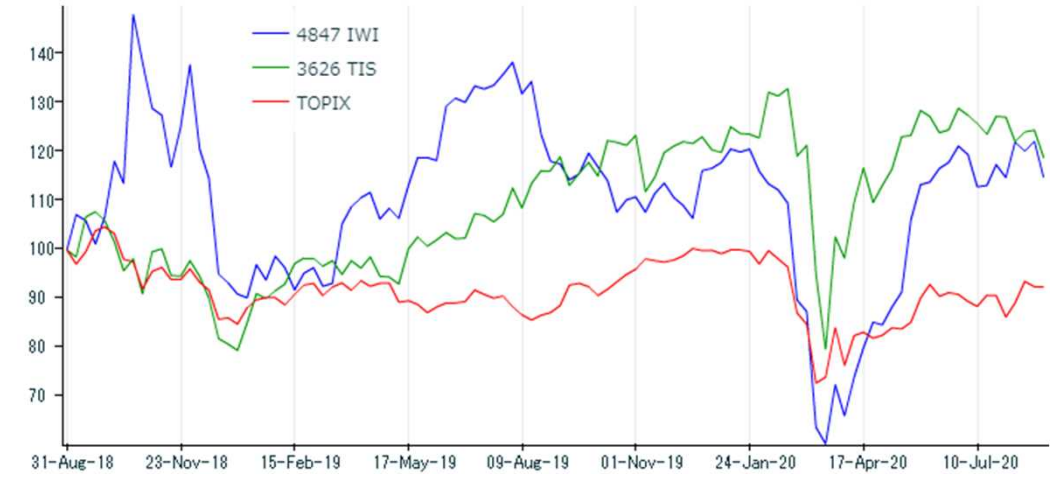
Source: exhibits above from the company website and IR results briefing materials

INTELLIGENT WAVE INC.

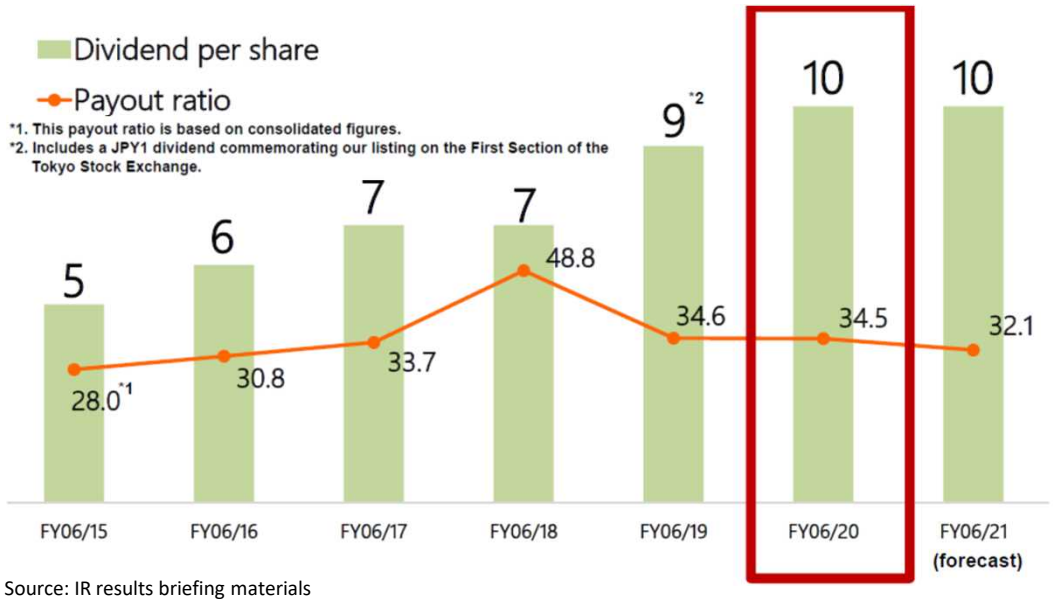
INTELLIGENT WAVE INC. 2-Year Share Price Chart (weekly)



INTELLIGENT WAVE INC. Relative Performance

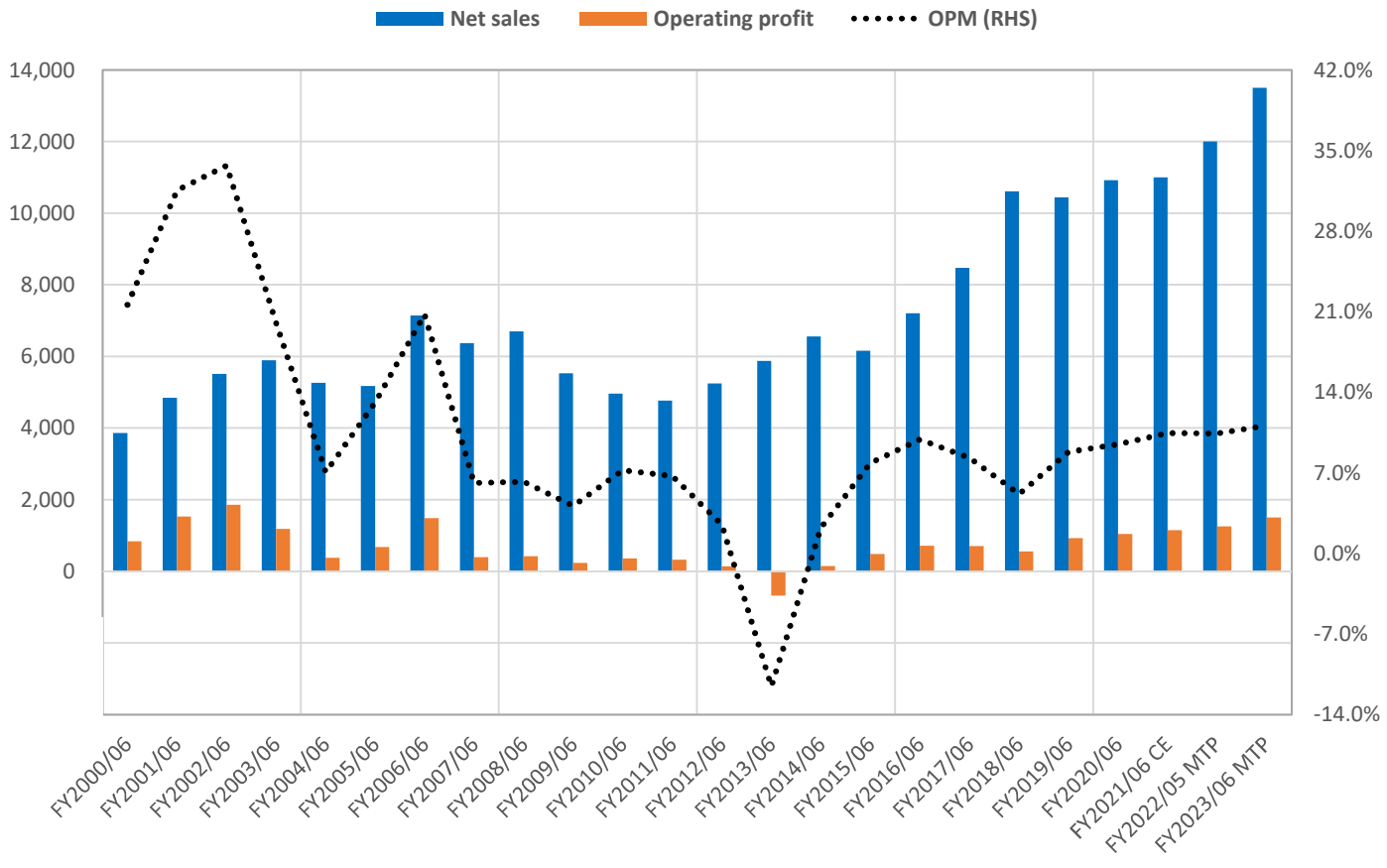


Source: SPEEDA



Source: IR results briefing materials

INTELLIGENT WAVE INC. Earnings History and MTP Targets (JPY mn)



Source: compiled by Sessa Partners from SPEEDA data and IR results briefing materials.

INTELLIGENT WAVE INC. CEO Tsukasa Iseki Brief Bio

Title	Name	Birth	Date	Experience	Shares Owned
Representative Director, CEO	Tsukasa Iseki 	1955.02.14	1978/04	Joined Dai Nippon Printing Co., Ltd.	1,800
			2003/10	GM of Marketing Dept. V, Information Processing Solutions Mktg Div. I, Information Processing Solutions Operations	
			2006/04	GM of Marketing Dept. VI, Information Processing Solutions Operations	
			2012/10	Deputy GM of Information Solutions Operations	
			2013/09	Director, the Company	
			2014/09	Representative Director, Executive VP	
			2015/09	Representative Director, CEO (current)	

Source: FY6/19 YUHO. Note: The Board of Directors announced on 8/19 that current CEO Iseki has been nominated to be appointed through election at the upcoming Annual General Meeting of Shareholders (AGM) on 9/25 as Chairman and Representative Director. Current Director Kunimitsu Sato has been nominated to be appointed through election as CEO and Representative Director.

Income Statements

[J-GAAP] JPY mn, %	6.11 consol	6.12 consol	6.13 consol	6.14 consol	6.15 consol	6.16 consol	6.17 NC	6.18 NC	6.19 NC	6.20 NC
Total Revenue	4,763	5,242	5,871	6,558	6,160	7,207	8,470	10,604	10,443	10,921
Cost of Sales	3,121	3,867	5,397	5,217	4,381	5,213	6,337	8,381	7,637	7,940
Gross Profit	1,642	1,374	473	1,342	1,779	1,993	2,132	2,223	2,807	2,981
Gross Margin	*34.5*	*26.2*	*8.1*	*20.5*	*28.9*	*27.7*	*25.2*	*21.0*	*26.9*	*27.3*
SG&A expenses	1,321	1,243	1,151	1,196	1,295	1,279	1,430	1,675	1,885	1,944
Operating Profit	321	132	(678)	146	484	714	703	548	922	1,036
Operating Profit Margin	*6.7*	*2.5*	*(11.5)*	*2.2*	*7.9*	*9.9*	*8.3*	*5.2*	*8.8*	*9.5*
Non-Operating Income	31	29	96	44	16	21	69	31	37	77
Interest and Dividends Income	22	19	24	20	11	2	13	26	26	46
Non-Operating Expenses	10	6	5	5	10	5	5	5	5	39
Interest Expenses	0		0		0	1	1	1	0	0
Income from Equity Method - Non-Operating			60	14	1	5				
Ordinary Profit	342	155	(587)	184	490	731	766	574	954	1,075
Ordinary Profit Margin	*7.2*	*3.0*	*(10.0)*	*2.8*	*8.0*	*10.1*	*9.0*	*5.4*	*9.1*	*9.8*
Extraordinary Gains/Losses	(82)	0	51	1	82	(15)	0	0		
Extraordinary Gain	37	20	67	1	297					
Extraordinary Loss	119	20	16	0	215	15	0	0		
Pretax Profit	260	155	(536)	185	572	716	766	573	954	1,075
Pretax Profit Margin	*5.5*	*3.0*	*(9.1)*	*2.8*	*9.3*	*9.9*	*9.0*	*5.4*	*9.1*	*9.8*
Income Taxes	130	(115)	(187)	98	101	237	219	196	270	313
Income Taxes - Current	105	1	1	12	39	147	329	227	442	265
Income Taxes - Deferred	25	(116)	(188)	86	63	89	(110)	(32)	(173)	48
Income from Equity Method							7	13	5	9
Net Profit attributable to owners of parent	129	270	(349)	87	471	479	547	377	684	762
Net Profit Margin (attributable to owners of parent)	*2.7*	*5.2*	*(5.9)*	*1.3*	*7.6*	*6.6*	*6.5*	*3.6*	*6.5*	*7.0*
Other Comprehensive Income		71	8	49	44	(119)				
Net Gain on Revaluation of Available-for-sale Financial Assets(CI)		78	2	43	37	(106)				
Unfunded Retirement Benefit Obligation with Respect to Foreign Consolidated Companies						(23)				
Foreign Currency Translation Adjustments (CI)		(7)	5	6	5	11				
Comprehensive Income		341	(341)	136	515	360				
(Others)										
EBIT	238	136	(560)	165	561	715	754	548	928	1,029
EBITDA	393	239	(547)	336	740	928	1,040	1,033	1,630	1,642
EBITDA Margin	*8.3*	*4.6*	*(9.3)*	*5.1*	*12.0*	*12.9*	*12.3*	*9.7*	*15.6*	*15.0*
(Detail of Expenses)										
Total Payroll	839	830	740	761	809	803	2,866	3,057	3,332	
Payroll	839	830	740	761	809	803	641	727	829	
Labor Cost							2,225	2,330	2,502	
Rent Expenses (inc. Lease)	89	73	64	60	61	61				
Advertising Expenses	24	23	26	33	42	24				
Packing, Transportation and Warehousing										
Travel and Communication	46	40	43	38	47	51				
R&D Expenses	52	13	9	24	14	9	5	6	32	
Enterprise Taxes, Taxes and Dues										
Depreciation	72	107	131	190	256	214	337	485	708	606

Source: SPEEDA

Balance Sheets

[J-GAAP]	6.11	6.12	6.13	6.14	6.15	6.16	6.17	6.18	6.19	6.20
JPY mn, %	consol	consol	consol	consol	consol	consol	NC	NC	NC	NC
Total Assets	5,717	6,363	5,755	5,640	6,482	7,027	8,508	8,837	10,032	10,552
Current Assets	3,822	4,335	3,560	3,524	4,560	4,682	4,985	5,256	6,054	6,381
Cash Cash Equivalents And Short-term Investments	2,783	2,808	2,085	2,420	2,957	2,852	2,578	2,840	3,255	3,642
Cash & Cash Equivalents	2,783	2,808	2,085	2,420	2,957	2,852	2,578	2,840	3,255	3,642
Accounts Receivables	826	814	689	660	881	1,292	982	1,093	1,456	1,720
Accounts Receivable - Other and Accrued Income					377					
Inventories	121	480	577	251	133	264	828	547	641	413
Finished Goods and Merchandise	2	1	17	18	30	12	167	24	13	27
Other Inventories	119	479	560	233	103	252	661	523	628	387
Advance Paymentss							272	384	504	381
Prepaid Expenses							112	167	178	219
Deferred Tax Assets - Current	59	142	154	154	161	91	203	222		
Allowance for Doubtful Accounts - Assets	(1)	(1)	0							
Non-Current Assets	1,895	2,028	2,195	2,116	1,921	2,345	3,523	3,581	3,978	4,171
Property, Plant & Equipment (PPE)	388	327	307	290	277	401	420	520	541	538
Lands	124	84	84	84	84	84	84	84	84	84
Intangible Assets	132	206	315	367	285	557	1,421	1,515	1,341	1,465
Investments and Other Assets	1,375	1,495	1,573	1,459	1,359	1,388	1,682	1,546	2,096	2,167
Investment Securities (inc. Subsidiaries and Affiliates)	887	990	880	864	924	762	1,149	979	1,260	1,384
Investment Securities	887	990	880	864	924	762	1,124	954	1,235	1,359
Stocks of Subsidiaries and Affiliates							25	25	25	25
Long-Term Loans	26	26	30	32	29	28	1	1		
Long-Term Trade Receivables							64	64		
Long-term Prepaid Expenses						80	137	191	111	144
Deferred Tax Assets - Non-Current	9	25	198	88	20	68		9	335	249
Allowance for Doubtful Accounts - Fixed	(97)	(96)	(96)	(89)	(89)	(88)	(62)	(62)		
Total Liabilities	1,011	1,443	1,308	1,188	1,647	1,964	2,861	3,122	3,660	3,569
Current Liabilities	765	1,147	1,007	881	1,150	1,373	2,252	2,523	3,058	2,951
Trade Payables	249	617	377	192	321	363	553	543	332	627
Accounts Payable - Other and Accrued Expenses							202	262	327	251
Short-Term Debt		9	10	10	12	34	28	36	35	29
Short-Term Borrowings		9	10	10	12	0	0	0	0	29
Current Portion of Long-term Debt						34	28	36	35	
Current Portion of Long-Term Borrowings						34	28	36	35	
Advances Received							822	1,054	1,428	1,382
Non-Current Liabilities	246	296	301	307	497	591	609	599	601	618
Long-Term Debt		35	29	18	17	102	74	74	39	10
Long-Term Borrowings		35	29	18	17	102	74	74	39	10
Deferred Tax Liabilities - Non-Current							56			
Provision for Retirement Benefits	204	198	214	236	433	438	424	444	475	520
Asset Retirement Obligations - Non-Current		42	42	43	43	52				
Total Net Assets	4,706	4,920	4,447	4,451	4,835	5,063	5,648	5,715	6,373	6,983
Total Shareholders' Equity	4,706	4,920	4,447	4,451	4,835	5,063	5,648	5,715	6,373	6,983
Shareholders' Equity	4,652	4,749	4,269	4,224	4,563	4,910	5,222	5,408	5,908	6,434
Capital Stock	844	844	844	844	844	844	844	844	844	844
Capital Surplus	560	560	560	560	560	560	560	561	561	573
Retained Earnings	3,248	3,346	2,865	2,820	3,160	3,507	3,825	4,018	4,518	5,043
Legal Retained Earnings							18	18	18	18
Treasury Stock							(6)	(15)	(15)	(27)
Accumulated Other Comprehensive Income	54	171	179	228	271	153	425	307	464	550
Valuation Difference On Available-for-sale Securities	119	198	200	243	282	176	425	307	464	550
Foreign Currency Translation Adjustments	(65)	(27)	(21)	(15)	(11)					
(Supplemental data)										
Shareholders' Equity Ratio	82.3	77.3	77.3	78.9	74.6	72.1	66.4	64.7	63.5	66.2
ROE	2.8	5.6	(7.5)	2.0	10.1	9.7		6.6	11.3	11.4
ROA	2.3	4.5	(5.8)	1.5	7.8	7.1		4.3	7.2	7.4
ROIC	4.1	5.1	(10.4)	1.1	8.2	9.5		6.1	10.6	10.7
Interest-bearing Debt		44	39	28	29	136	102	110	74	39

Source: SPEEDA

Statements of Cash Flows

[J-GAAP] JPY mn, %	6.11 consol	6.12 consol	6.13 consol	6.14 consol	6.15 consol	6.16 consol	6.17 NC	6.18 NC	6.19 NC	6.20 NC
Cash Flows from Operating Activities	795	252	(588)	620	839	124	1,173	1,213	1,237	1,547
Depreciation and Amortization - CF	72	107	131	190	256	214	337	485	708	606
Depreciation - CF	72	107	131	190	256	214	337	485	708	606
Gain/Loss on Valuation of Securities and Investment Securities	1		16					0		
Gain/Loss on Sale of Securities and Investment Securities			(67)	(1)	(297)					
Gain/Loss on Sale of Investment Securities			(67)	(1)	(297)					
Gain/Loss on Sale of PPE	(1)	20	0	0	0	1	0	0		
Interest and Dividends Received - Operating CF	22	19	24	21	12	4	13	26	26	46
Interest Paid - Operating CF	0		0		0	(1)	(1)	(1)	0	0
Cash Flows from Investing Activities	(61)	(25)	3	(47)	(263)	(192)	(1,151)	(604)	(602)	(753)
Payments for Purchases of Securities and Investment Securities	(1)	(1)	(129)	(51)	(203)	(1)	(1)	(1)	(304)	(2)
Payments for Purchases of Investment Securities	(1)	(1)	(129)	(51)	(203)	(1)	(1)	(1)	(304)	(2)
Proceeds from Sales of Securities and Investment Securities			368	51	100	380				
Proceeds from Sales of Investment Securities			368	51	100	380				
Payments for Purchases of Stocks of Subsidiaries and Affiliates			(14)							
Purchases/Sales of PPE	(13)	51	(12)	(18)	(10)	(158)	(84)	(121)	(92)	(181)
Payments for Purchases of PPE	(14)	(13)	(12)	(18)	(10)	(158)	(84)	(121)	(92)	(181)
Proceeds from Sales of PPE	1	64		0						
Purchases/Sales of Intangible Assets	(104)	(144)	(196)	(215)	(142)	(353)	(1,170)	(503)	(412)	(580)
Payments for Purchases of Intangible Assets	(104)	(144)	(196)	(215)	(142)	(353)	(1,170)	(503)	(412)	(580)
Interest and Dividends Received - Investing CF	4	3								
Cash Flows from Financial Activities	(132)	(138)	(142)	(142)	(143)	(34)	(199)	(349)	(220)	(408)
Proceeds from Short-Term Borrowings	200		500		250	1,465	800	410		
Repayments of Short-Term Borrowings	(200)		(500)		(250)	(1,465)	(800)	(410)		
Proceeds from Issuance of Stock										
Redemption/Retirement of Stock							(6)	(130)	0	(136)
Cash Dividends Paid	(132)	(133)	(132)	(132)	(132)	(132)	(158)	(184)	(184)	(236)
Foreign exchange adjustment	(8)	(5)	4	5	4	(3)	3	1	(1)	0
Changes in Cash Flow	593	27	(723)	435	437	(105)	(174)	261	415	387
Cash & Cash Equivalent - Beginning	2,088	2,681	2,708	1,985	2,420	2,857	2,752	2,578	2,840	3,255
Cash & Cash Equivalent - Ending	2,681	2,708	1,985	2,420	2,857	2,752	2,578	2,840	3,255	3,642
Free Cash Flow (FCF)	734	227	(585)	573	576	(68)	22	609	635	794
Per share data										
DPS	500.0	500.0	500.0	5.0	5.0	6.0	7.0	7.0	9.0	10.0
EPS	491.5	1,026.9	-1,325.3	3.3	17.9	18.2	20.8	14.4	26.0	29.0
BPS	17,866	18,680	16,884	169	184	192	215	217	242	266

Source: SPEEDA

Corporate History

Month/Year	History
December 1984	INTELLIGENT WAVE INC. was established with paid-in capital of 98 million yen in Shinbashi, Minato-ku, Tokyo for the purpose of importing, exporting, and sales of computer equipment, development of computer software, and associated consulting services
February 1985	Head Office moved to Kayabacho, Chuo-ku, Tokyo
September 1985	Opened Niigata Branch, and installed a Stratus Computer, the first in Japan
January 1989	Company owned building completed in Shibata-shi, Niigata
April 1991	Agency agreement signed with Neuron Data, Inc.
May 1991	Established INTELLIGENT WAVE PHILIPPINES, INC. in Manila
May 1993	Head Office moved to Kiba, Koto-ku, Tokyo
August 1995	Opened Shizuoka Branch
December 1996	Agency agreement signed with BEA SYSTEMS JAPAN, LTD. (TUXEDO)
March 1997	Fiscal year in the Articles of Incorporation changed to the period of one year from July 1 of each year to June 30 of the following year
September 1998	Closed Shizuoka Branch accompanying the operations integration through capital participation in Shizuoka Keisan Center Co., Ltd. (currently APLIS Co., Ltd.)
November 1999	Agency agreement signed with Software Technology Corporation Co., Ltd.
February 2000	All shares of APLIS Co., Ltd. sold through conversion into a wholly-owned subsidiary by CREDIA CO., LTD.
June 2000	Shares of INTELLIGENT WAVE PHILIPPINES, INC. partially sold
March 2001	Acquired land at Hakodate Industrial Park
June 2001	Over-the-counter stock listing on Japanese Association of Securities Dealers Automated Quotations (JASDAQ)
June 2001	Paid-in capital increased to 843,750 thousand yen through a public offering accompanying the over-the-counter stock listing
September 2004	Established Intelligent Wave USA, Inc. in the United States
December 2004	Canceled the over-the-counter stock registration with JASDAQ, and listed stock on the JASDAQ Securities Exchange
December 2004	Established INTELLIGENT WAVE EUROPE LIMITED in the United Kingdom
February 2005	Head Office moved to Shinkawa, Chuo-ku, Tokyo
June 2005	Established Intelligent Wave Korea Inc. in South Korea
July 2009	Liquidated INTELLIGENT WAVE EUROPE LIMITED (U.K.)
April 2010	Tender offer by Dai Nippon Printing Co., Ltd., for shares of the Company completed, making the Company a subsidiary of Dai Nippon Printing Co., Ltd.
April 2010	Stock listed on Osaka Securities Exchange (JASDAQ Market) following the merger of the JASDAQ Securities Exchange and Osaka Securities Exchange
October 2010	Stock listed on Osaka Securities Exchange JASDAQ (Standard) following the merger of the Osaka Securities Exchange Hercules Market, the Osaka Securities Exchange JASDAQ Market, and the Osaka Securities Exchange NEO Market
March 2012	Closed Niigata Branch
June 2012	Liquidated Intelligent Wave USA, Inc. (U.S.)
June 2013	Acquired additional shares of ODN Solution Co., Ltd., and converted it into an affiliate company using equity method
July 2013	Stock listed on the Tokyo Stock Exchange JASDAQ (Standard) following the merger of the Osaka Securities Exchange and Tokyo Stock Exchange Cash Equity Market
November 2014	Held celebration for the 30th anniversary of establishment
June 2016	Liquidated Intelligent Wave Korea Inc. (South Korea)
June 2018	Listed market changed to Second Section of the Tokyo Stock Exchange
March 2019	Company shares listed on the First Section of the Tokyo Stock Exchange

Source:
FY6/19 YUHO

Proposed Change of Representative Directors for Election at the Upcoming AGM (2020.09.25)

New position	Reappointment /New appointment	Name	Current position
Chairman, Representative Director	Reappointment	Tsukasa Iseki	Chief Executive Officer, Representative Director
Chief Executive Officer, Representative Director	Reappointment	Kunimitsu Sato	Director

Source: press release 2020.08.19

Positions and responsibilities	Name	Date of birth	Past experience		Term of office	Number of shares of the Company held (shares)
Chief Executive Officer, Representative Director	Tsukasa Iseki	February 14, 1955	April 1978 October 2003 April 2006 October 2012 September 2013 September 2014 September 2015	Joined Dai Nippon Printing Co., Ltd. General Manager of Marketing Dept. V, Information Processing Solutions Marketing Div. I, Information Processing Solutions Operations General Manager of Information Processing Solutions Marketing Div. VI, Information Processing Solutions Operations Deputy General Manager of Information Solutions Operations Director, the Company Representative Director and Executive Vice President Chief Executive Officer, Representative Director (current)	(Note) 4	1,800

Positions and responsibilities	Name	Date of birth	Past experience		Term of office	Number of shares of the Company held (shares)
Director	Kunimitsu Sato	December 23, 1959	April 1983 October 2001 April 2006 April 2007 October 2012 April 2016 April 2016 September 2019	Joined Dai Nippon Printing Co., Ltd. General Manager of Sales Development Dept., IC Card Div., Business Forms & Securities Operations General Manager of IC Card Business Development Dept., IC Card Business Development Div., Information Processing Solutions Operations General Manager of IC Card Business Development Div., Information Processing Solutions Operations General Manager of Digital Security Div., Information Solutions Operations Deputy General Manager of C&I Center, Information Innovation Operations General Manager of C&I Center, Information Innovation Operations (current) Director, the Company (current)	(Note) 4	—

4. The term of office of Directors is from the conclusion of the Annual General Meeting of Shareholders related to the FY06/2019 to the conclusion of the Annual General Meeting of Shareholders related to the FY06/2020.

Source: FY6/19 YUHO

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