SOCIETE GENERALE
Cross Asset Research

Pan Asia Research

www.equities.htisec.com

Distributed by Societe Generale and its affiliates

Zenkoku Hosho (7164 JP)

HAITONG 海通國際

Target Price	**¥5,450**
Current Price	**¥4,750**
% Upside	**15%**

A Tale of Two Tails: Long Tail Bank Share Gains and Short Tail Delinquency

Diversified Financials
Japan
4 Aug 2015

BUY

Target: ¥5,450
% Upside: 15%

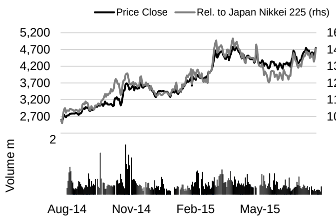
52wk Low ¥2,518 (-47%)
¥4,750 04 Aug 2015
52wk High ¥4,780 (1%)

Initiation

Basic Share Information

Market cap	¥327b/US$3b
Daily volume (3mth)	US$8m
Shares outstanding	69m
Free float	69%
Debt-to-equity	-238%
1 yr high	¥4,780
1 yr low	¥2,518
Foreign shareholding	30%
Last HTI contact w/ Co	20 Jul 15

Price/Volume



Source: Bloomberg

	1mth	3mth	12mth
Absolute	2.7%	7.7%	82.8%
Absolute USD	1.6%	4.3%	50.8%
Relative to NKY	2.8%	2.6%	50.2%

Tony Tanaka
Haitong International Research Ltd
tony.tanaka@htisec.com
Local Knowledge, Global Reach

Tokyo Office	(81) 3 6402 7620
London Office	(44) 20 7397 2700
Hong Kong Office	(852) 2899 7090

Growing MI Is Mission Probable, Rather than Impossible

Summary: We initiate coverage of Zenkoku Hosho with a BUY rating. Zenkoku is a leading mortgage insurance (MI) provider in Japan. It has accumulated strong expertise in credit assessment and has developed a national origination network. The company has significant insurance in-force (IIF) built up through its leading market share in *shinkin* mortgages (*shinkin* are similar to credit cooperatives), but its market share in bank mortgages stands at just 2.2%. Given the large mortgage volumes controlled by city banks, we see penetration of this segment as the company's the key growth driver going forward.

Target Price and Catalyst: Our target price is ¥5,450, implying potential upside of 15% from last close. Stock price catalysts include the signing of master policies with city banks, business growth with existing bank partners, regulatory changes favorable to MI such recognition of MI in Basel 3, and low loss ratio supported by continued credit market improvement.

Earnings: Management guides net premiums earned (NPE) of ¥30,840mn for FY3/16 and ¥32,680mn for and FY3/17, versus our estimates of ¥30,130mn and ¥31,355mn. The company projects net earnings of ¥16,000mn for FY3/16 and ¥16,460mn for FY3/17, which compares with our targets of ¥16,030mn and ¥16,067mn.

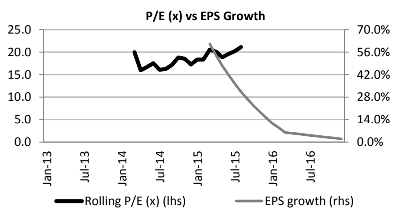
Valuation: Our target price is derived using the average of our estimated appraisal value (AV), PBR, and price-to-embedded value (PEV). The target price implies a PBR of 6.2x, 23.5x FY3/16 guided earnings, and 3.6x our estimated EV. We estimate EV assuming a deterministic run-off of in-force policies. We estimate the value of new businesses (VNB) by simulating market size, Zenkoku's new insurance written (NIW), and NPE each year until 2035. AV is the sum of EV and VNB. We derive PBR from a regression of PBR on ROE using global MI peers and by applying an ROE of 22.5%. We assume 11% return on embedded value (RoEV) to derive a fair PEV of 3.6x. Due to the equity story of gradual market share gain and IIF run-off, the majority of value is derived from VNB as evident in the low AV/VNB ratio of 1.4x.

	Mar-14A	Mar-15A	Mar-16E	Mar-17E	Mar-18E
Total turnover (¥b)	28.33	31.20	31.65	33.00	34.72
Operating profit (¥b)	15.47	24.07	23.92	23.98	22.97
Pre-tax profit (¥b)	15.53	24.11	23.92	23.98	22.97
Net income to ord equity (¥b)	9.38	15.11	16.03	16.07	15.39
Net profit growth	37.8%	61.1%	6.1%	0.2%	(4.2%)
P/E (x)	34.9	21.6	20.4	20.4	21.3
Adj EV/EBITDA (x)	(10.13)	(4.56)	(2.55)	(2.91)	(3.84)
P/B (x)	6.9	5.4	4.5	3.8	3.4
ROE	21.7%	28.0%	24.0%	20.0%	16.4%
Dividend yield	0.6%	1.0%	1.1%	1.1%	1.0%
EPS HTI New (¥)	136.2	219.5	232.8	233.3	223.5
Consensus EPS (¥)	121.2	211.0	243.3	259.1	262.5
HTI EPS vs Consensus	12.4%	4.0%	(4.3%)	(9.9%)	(14.8%)

Source: Company data, Bloomberg, HTI estimates

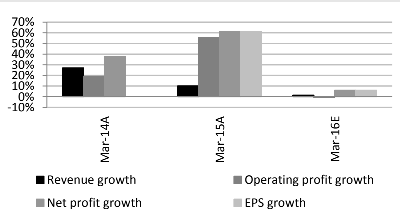
Click here to download the working model

Valuation



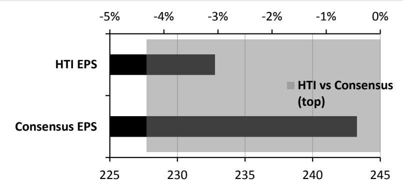
Source: Company data, Bloomberg, HTI estimates

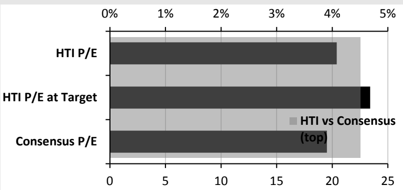
Earnings Trends



Source: Company data, Bloomberg, HTI estimates

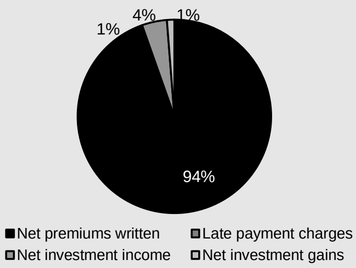
Earnings: HTI vs Consensus





Source: Company data, Bloomberg, HTI estimates

FY3/15 Revenue Breakdown



Source: Company data

Investment Thesis

BUY

- Zenkoku has demonstrated strong growth in NIW and NPE and margin improvement, which is likely to continue given the healthy near-term outlook.
- We expect the benign macroeconomic environment to continue, resulting in historically low probability of delinquency (PD) and loss-given-delinquency (LGD). This backdrop supports reduced loss provisioning which would support improved GAAP earnings.
- The gradual release of unearned premiums reserves (UPR) should provide a high-degree of revenue visibility. Revenue is primarily a function of IIF on a multi-year rolling basis. With IIF close to ¥10trn with a stable flow of NIW from *shinkin*, Zenkoku has established an attractive stock-based business model.
- MI underwriting carries inherent operating leverage and we expect Zenkoku's combined ratio to improve and stabilize at 36% from FY3/18 as business scales.
- With its sizeable and diversified MI portfolio, Zenkoku has built a comparative advantage in managing credit risks over regional financial institutions. We see Zenkoku leveraging its independence to gain share from banks' captive insurers
- A lack of capital regulation implies Zenkoku can provision more flexibly than banks without increasing risks. Banks can offload the relatively high-risk mortgages on their books and relieve required capital while Zenkoku can take on the risk at a lower capital cost than banks.

Company Snapshot

Zenkoku is the only independent MI provider in Japan. It provides MI to private mortgage lenders, generally with 100% loss coverage. It has built MI underwriting relationships with 710 lenders, including banks, *shinkin*, and other non-bank lenders such as Japan Agriculture (JA). Zenkoku has IIF of ¥9.2trn, a 5.0% share of the total mortgage balance outstanding. Its delinquency rate declined to 14bps in FY3/15 from 30bps in FY3/11. The majority of its insured mortgages are prime and for owner-occupied properties as it is Zenkoku's strategy to avoid the subprime and Alt-A grade mortgages.

MI is underwritten on an individual mortgage when it is originated, secured by the underlying residential properties. Policies are purchased by borrowers for lenders and paid in a single premium at origination. Upon delinquency, Zenkoku reimburses the lender for credit losses and forecloses the property to recover its payment.

Zenkoku is subject to neither banking nor insurance regulations, so there are no capital requirements. It makes underwriting decisions and loss provisioning according to its internal policies and models.

Key Investment Metrics

Revenue Growth

Low | **Medium** | High

We expect NIW to grow steadily driven by slightly rising mortgage origination and Zenkoku's share gains, translating into our estimated NPE of ¥30,900mn and ¥31,600mn for FY3/16 and FY3/17. Because UPR are released gradually, NPE should grow more slowly than NIW.

Profit Margins

Low | Medium | **High**

Due to a revision of loss reserves, the combined ratio declined to Zenkoku's historical low of 16% in FY3/15. We expect loss ratios of 10% and 14% and combined ratios of 26% and 29%, respectively, in FY3/16 and FY3/17. We expect the combined ratio to recover to 36% thereafter in our projections.

Shareholder Returns

Low | Medium | **High**

Shareholder return has improved significantly as margins have expanded. ROE rose to 28% in FY3/15 from 22% in FY3/14 and dividend payout stayed at 22%. We expect earnings to be robust, but see ROE declining through FY3/18 as book equity rises faster than NPE.

Balance Sheet Risks

High | Medium | **Low**

Although IIF grew in FY3/15, loss reserves have decreased reflecting reduced PD and LGD, in line with the industry trend. Capital adequacy ratios look healthy. We estimate the reserves-to-expected loss ratio was 275% and solvency margin ratio was 230% in FY3/15. Using a conservative 40% risk weight to IIF, we believe risk in force (RIF) was ¥3.7trn at end-FY3/15, resulting in an RIF-to-equity ratio of 61x. We believe loss reserves are sufficient under our assumption of benign credit environment. Loss provisions would have to be revised upward significantly in the case of long-tail losses, which we think are unlikely.

Barriers to Entry

Low | Medium | **High**

Barriers to entry are high because mortgage lenders take counterparty risks and require MI providers to possess a long operating history and robust financial strength. Zenkoku has strong expertise and experience in evaluating mortgage borrowers as well as the ownership of a diversified MI portfolio.

Asia Exposure

Low | Medium | High

Zenkoku only operates in Japan and has no overseas exposure.

FX Exposure

Low | Medium | High

The company's investment portfolio is predominantly JPY-denominated. Its foreign bond funds are currency hedged, so currency exposure is minimal.

Corporate Governance

Low | **Medium** | High

We see adequate governance in place with two external directors and major life insurance companies as key investors.

Our Model Assumptions

Market share gains should continue, especially in bank mortgages, contributing to rising NIW

We see no use of reinsurance

We assume a conservative investment return of 1.5%

We expect the loss ratio to decline to 10% in FY3/16 and recover to 20% in FY3/18

We expect the expense ratio should stay at 16%, resulting in a combined ratio of 26–36% during FY3/16–18

Profit & Loss (¥b)	Mar-14A	Mar-15A	Mar-16E	Mar-17E	Mar-18E
Gross premiums written	35,582	36,712	37,268	43,621	49,040
Premiums ceded	402	0	0	0	0
Net premiums written	**35,180**	**36,712**	**37,268**	**43,621**	**49,040**
Increase in unearned premiums	8,675	7,299	7,136	12,266	16,128
Net premium earned	**26,505**	**29,413**	**30,131**	**31,355**	**32,912**
Late payment charges	132	94	121	125	132
Net investment income	999	1,302	1,397	1,517	1,674
Net investment gains	694	386	0	0	0
Total revenues	**28,330**	**31,195**	**31,649**	**32,997**	**34,718**
Provision for losses	4,109	2,854	3,000	4,100	6,506
Provision for subrogation	4,238	-488	0	0	76
Payroll and compensation accruals	1,417	1,519	1,543	1,605	1,685
Depreciation	325	267	193	201	211
Others	2,771	2,973	2,989	3,110	3,265
Total expenses	12,860	7,125	7,725	9,016	11,743
Operating profit	**15,470**	**24,070**	**23,925**	**23,981**	**22,975**
Pretax profit from non-operating activities	58	44	0	0	0
Income before tax	15,528	24,114	23,925	23,981	22,975
Income taxes	6,146	9,002	7,895	7,914	7,582
Net income	**9,382**	**15,112**	**16,030**	**16,067**	**15,393**

Source: Company, HTI estimates

✓ Key P/L Takeaway

The distribution of market shares among mortgage lenders and Zenkoku's share in each lender type are critical to growing its IIF

We calculate net premium written (NPW) on a top-down basis by estimating overall mortgage market size, market shares of mortgage lenders, and Zenkoku's share in each lender type. We break the total IIF into existing IIF to be run off and newly added IIF by vintage. We track the NPE by each vintage to arrive at our NPE estimates. With IIF of ¥9.2trn in FY3/15, the majority of Zenkoku's near-term NPE is from the run-off of existing policies. We expect new policies to be written at the prevailing premium rates although credit conditions have improved, contributing to improved profitability. We apply management's loss provisions for FY3/16 and FY3/17 to our estimates for those years. Loss severity is generally small, so loss frequency drives earnings. We ignore other non-core insurance activities as they are immaterial.

Our Model Assumptions

Cash, which makes up the majority of current assets, could be invested to enhance returns

We expect investments to be at 50% of unearned premiums over our forecast period

We expect loss reserves to grow modestly over our projection period as IIF expands while credit conditions improve

Although Zenkoku is not subject to any capital regulation, we expect it to allocate its net income to a discretionary contingency reserve

Balance Sheet (¥b)	Mar-14A	Mar-15A	Mar-16E	Mar-17E	Mar-18E
Cash and cash equivalents	114,670	112,693	125,087	141,989	161,790
Short-term investments	10,958	31,353	27,935	30,327	33,472
Subrogation recoverable	5,938	4,912	5,840	6,882	7,120
Other Current Assets	7,082	5,766	6,563	6,563	6,563
Total current assets	**138,648**	**154,724**	**165,426**	**185,761**	**208,944**
Net tangible assets	186	180	200	200	200
Software and intangible assets	538	491	466	443	421
Investments	53,641	56,351	65,232	70,813	78,151
Other non-current assets	2,815	2,217	2,700	2,700	2,700
Total noncurrent Assets	**57,180**	**59,239**	**68,598**	**74,156**	**81,472**
Total assets	**195,828**	**213,963**	**234,024**	**259,917**	**290,416**
Payables	7,453	6,788	7,673	7,249	7,422
Unearned premiums	128,820	136,119	143,255	155,521	171,649
Loss reserves	11,857	10,193	9,830	11,328	13,500
Other liabilities	411	339	343	343	343
Total liabilities	**148,541**	**153,439**	**161,102**	**174,441**	**192,913**
Common Stock	11,296	11,296	11,296	11,296	11,296
Retained earnings	36,296	49,343	61,867	74,420	86,447
Other reserves	(304)	(117)	(240)	(240)	(240)
Shareholders' equity	**47,288**	**60,522**	**72,923**	**85,476**	**97,503**
Total Liabilities & shareholders' equity	**195,829**	**213,961**	**234,024**	**259,917**	**290,416**

Source: Company data, HTI estimates

✓ **Key B/S Takeaway**

We expect debt to continue to be zero as Zenkoku has abundant quality capital.

Cash and investments account for the majority of Zenkoku's assets. With the long duration of mortgages, the company's investments can be invested over a long horizon to generate returns. On the other hand, mortgage risk exposure is more difficult to model than life insurance exposure and mortgages are subject to high default correlation, so liquidity is critical. Given the macroeconomic backdrop and the size of its existing reserves, we see the potential for Zenkoku to either shift more cash into long-term investments or reduce its capital intensity through share buy-backs, with minimal impact on its capital adequacy.

With its adequate capital position and lack of M&A opportunities, we do not see any financing risks in the near term.

Our Model Assumptions

Cash flow from operations is strongly positive, which is typical of an insurance company

Due to ALM, increasing RIF is matched with increasing investments so negative investment flows are largely liquidity transformation instead of economic outflows

We expect the dividend payout ratio to stay at 22% in our projection period and deem a 5% share buyback as feasible

Cash Flow (¥b)	Mar-15A	Mar-16E	Mar-17E	Mar-18E
Net income	15,112	16,030	16,067	15,393
Depreciation & amortization	267	193	201	211
Changes in noncash assets & liabilities	6,030	9,455	13,101	19,004
Cash flow from operating activities	**21,409**	**25,678**	**29,369**	**34,608**
Net purchases of investments available for sale	(23,105)	(5,463)	(7,973)	(10,483)
Net purchases of tangible & intangible assets	(32)	(188)	(177)	(188)
Cash Flow from investing activities	**(23,137)**	**(5,651)**	**(8,150)**	**(10,671)**
Dividends	(3,305)	(3,506)	(3,514)	(3,367)
Equity issuance / (share buyback)	(269)	(801)	(803)	(770)
Debt issuance / (debt redemption)	0	0	0	0
Cash flow from financing activities	**(3,574)**	**(4,307)**	**(4,317)**	**(4,136)**
Net increase in cash	(5,302)	15,719	16,902	19,801
Beginning cash	114,670	109,368	125,087	141,989
Ending Cash Balance	109,368	125,087	141,989	161,790

Source: Company, HTI estimates

Key Cash Flow Takeaway

Given the lack of capital regulation, a revision of risk attitude could enhance returns

The business model is inherently cash-generating with credit selection and asset-liability management as keys in our view. Almost all policies are of the single premium variety paid for at origination with loss provisions established immediately. UPR are released subsequently based on IIF. Cash and investments should to expand with business scale unless long-tail losses occur.

With its sizeable investment portfolio, we believe Zenkoku can enhance its returns by increasing allocation to alternative investments. Successful investments would translate into excess capital that could be released to shareholders.

Our Model Assumptions

We expect the top line to grow faster than the bottom line

Loss provisions for FY3/16 and FY3/17 are guided by management, and we assume 40bps of NIW thereafter

We expect ROE to decline, but management can proactively enhance return via more aggressive buy-backs

We expect capital ratios to strengthen as the balance sheet expands and loss ratio stays low

Per Share Data	Mar-14A	Mar-15A	Mar-16E	Mar-17E	Mar-18E
EPS	136	219	233	233	224
Revenue per share	411	453	460	479	504
BVPS	687	879	1,059	1,241	1,416
DPS	30.0	48.0	51.0	51.0	48.0
Shares in issue (million)	68.9	68.9	68.9	68.9	68.9
Key Ratios	**Mar-14A**	**Mar-15A**	**Mar-16E**	**Mar-17E**	**Mar-18E**
Valuation Measures					
P/Revenues (x)	11.2	10.2	10.0	9.6	9.1
P/E (x)	34.9	21.6	20.4	20.4	21.3
P/B (x)	6.9	5.4	4.5	3.8	3.4
Dividend yield	0.6%	1.0%	1.1%	1.1%	1.0%
Growth					
IIF growth	6.1%	6.3%	11.8%	2.8%	3.9%
NPE growth	24%	11%	2%	4%	5%
Revenues growth	27%	10%	1%	4%	5%
Operating profit growth	34%	56%	-1%	0%	-4%
Net earnings growth	38%	61%	6%	0%	-4%
Unearned revenues growth	7%	6%	5%	6%	7%
Margins and Returns					
Investment returns	3.1%	2.6%	1.6%	1.6%	1.6%
Loss ratio	31.5%	8.0%	10.0%	13.3%	20.0%
Expense ratio	17.0%	16.2%	15.7%	15.7%	15.7%
Combined ratio	48.5%	24.2%	25.6%	28.9%	35.7%
Tax rate	39.6%	37.3%	33.0%	33.0%	33.0%
Net earnings margin	33.1%	48.4%	50.6%	48.6%	44.3%
ROE	21.7%	28.0%	24.0%	20.0%	16.4%
Credit Ratios					
Debt to equity	0.0%	0.0%	0.0%	0.0%	0.0%
Solvency margin (\m)	38,757	53,923	65,077	77,410	89,044
Solvency margin ratio	176%	230%	249%	288%	319%
RIF to equity (x)	73	61	56	49	45

Source: Company, HTI estimates

Key Driver Takeaway

ROE should decline through FY3/18 as business expands

For FY3/15, the return on our estimated EV was 14.7% and ROE was 28.0%. We expect returns to gradually decline as book value grows at a faster rate than NPE released by previously written policies. Based on our outlook for a successful underwriting process and benign external environment, we expect the loss ratio to stay low, allowing Zenkoku room to release excess capital and improve ROE. We use ROE of 22.5% and RoEV of 11.0% for our valuation. We expect P/B to contract much faster than P/E in our projection period.

Company Outline and Operational Review

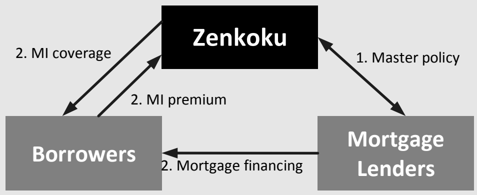
Zenkoku Hosho was founded in 1982 to provide guaranty services specifically to employee pension holders. Since 1997, the company has focused on providing MI to private mortgage lenders. It tried to diversify into numerous financial areas such as consumer credit and stockbroking, but divested all non-core businesses prior to its IPO in December 2012.

Zenkoku underwrites primary MI on a flow basis. It is the only sizeable independent MI provider in Japan. Although it also provides guarantee services for education loans and apartment loans, these are immaterial and have been excluded from our analysis.

Zenkoku's Nationwide Locations

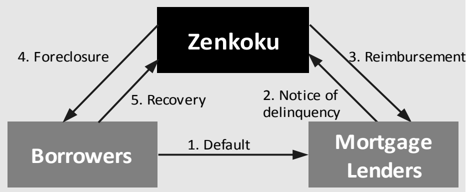
Source: Company data

Flows at Origination



Source: Company data

Flows at Delinquency



Source: Company data

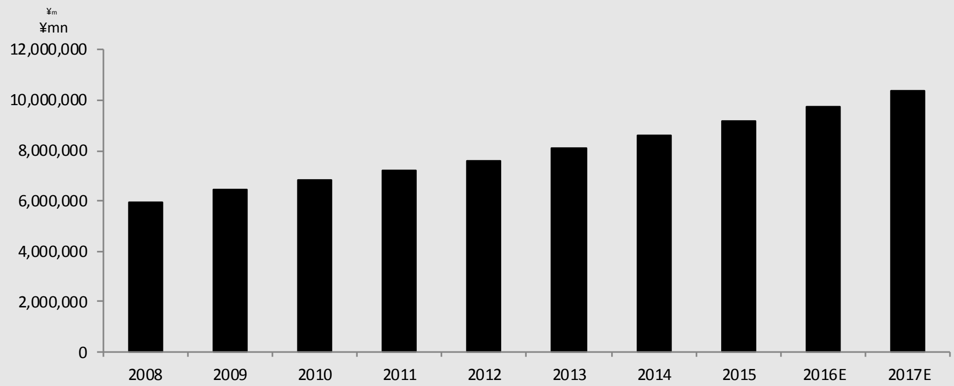
Only the mortgages of financial institutions that have entered into a master policy with Zenkoku are underwritten. At origination, borrowers are required to join a group life insurance program with Zenkoku as the benefactor.

Sizeable MI Book

By slowly expanding its business reach and broadening its distribution channel, Zenkoku has accumulated a stable flow of NIW and large IIF that rival those of megabank captive insurers. Zenkoku forecasts its IIF to surpass ¥10trn by FY3/17.

Given the lack of beta growth in Japan's mortgage market, the majority of book expansion is from alpha

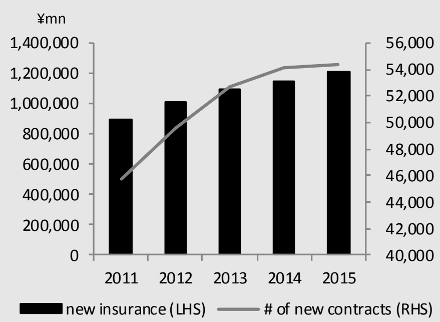
Zenkoku's Actual and Projected IIF



Source: Company data, Company estimates

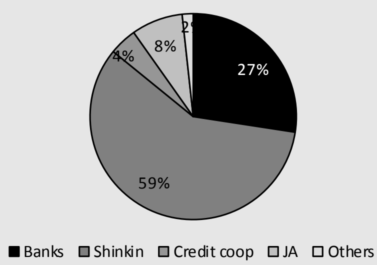
Shinkin dominate Zenkoku's book, and we expect this trend to persist until the growth in its share of bank business accelerates

Zenkoku's NIW



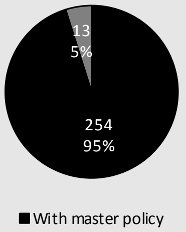
Source: Company data

Zenkoku's MI Book Breakdown in FY3/15



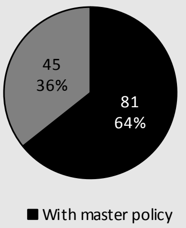
Source: Company data, Bank of Japan

Zenkoku's Share of *Shinkin* Partners



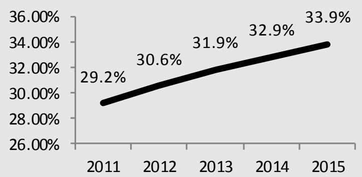
Source: Company data, Japan FSA

Zenkoku's Share of Bank Partners



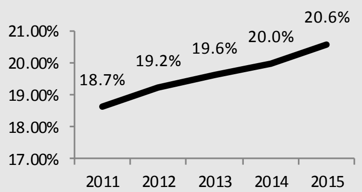
Source: Company data, Japan FSA

Zenkoku's Share in *Shinkin* Mortgages



Source: Company data

Zenkoku's Share in Credit Cooperatives

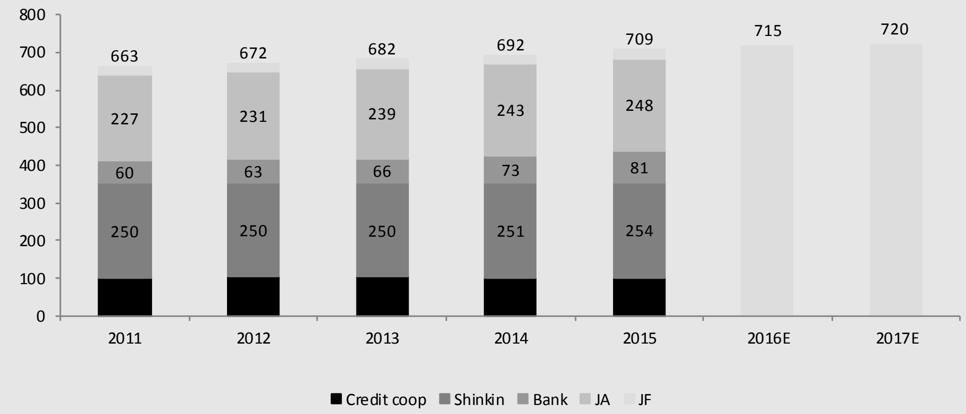


Source: Company data

Distribution Channels

Zenkoku markets its MI to lending institutions, which then list Zenkoku as a designated MI provider in their mortgage products. Therefore, the reach of Zenkoku's MI is determined by the depth and breadth of its base of partners (with lenders having signed a master policy). At end-FY3/15, Zenkoku had 709 partners across lender categories. Almost all *shinkin* have standing relationships with Zenkoku. The company is now focusing on expanding its bank partnerships, which we expect to be the next driver of its business growth.

Zenkoku's Bank Partnerships

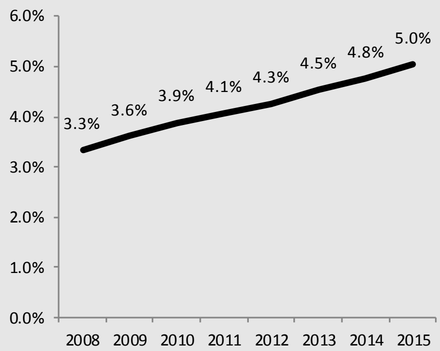


Source: Company data, Company estimates

Market Share

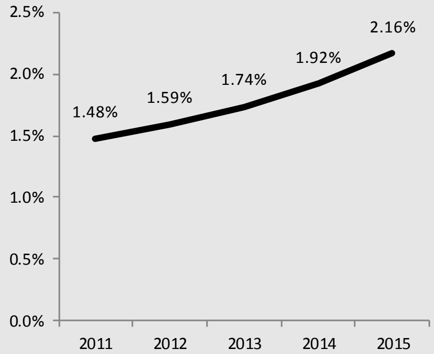
As an independent MI provider, Zenkoku has achieved significant market share in *shinkin* and credit cooperatives. Its share is showing growth momentum across originating lenders, and we think this is likely to continue due to its increasing lineup of competitive MI products that benefit both lenders and borrowers, its broadened distribution, its efficiency and responsiveness of assessment, and its enhanced industry standing following its IPO. Zenkoku's IIF was ¥9.2trn at the end-FY3/15, 5.0% of the total outstanding mortgage balance.

Zenkoku's Share of Overall Mortgage Market



Source: Company data, Bank of Japan

Zenkoku's Bank Market Share



Source: Company data, Bank of Japan

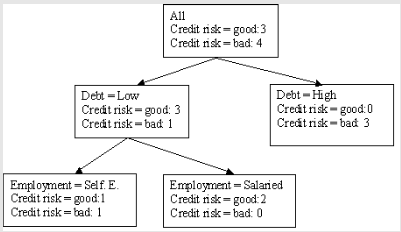
Underwriting and Risk Management

Zenkoku utilizes its national scale and portfolio diversity to underwrite delinquency risks of *shinkin* and tier-2 regional banks which lack scale. Tier-1 regional banks that have large regional scale and relatively diversified loan books use Zenkoku is mainly as an outsource option when they consider the credit risk too high to internalize. As a result, the average applicant credit quality is not high and Zenkoku is selective, rejecting up to 70% of such applicants each year. Zenkoku manages risks by restricting MI to owner-occupied housing and to property with a minimum level of expected LGD, among other factors.

Zenkoku uses internal data and external consumer credit data in its credit assessment. Upon receiving an MI application with satisfactory documentation, it proceeds to credit scoring. The company has developed a proprietary model that places an applicant into one of eight risk categories. Although the model structure is not disclosed, we understand that Zenkoku combines a tree model and logistical regression in its scoring process. A decision tree is used to produce a score, which is then input as a variable into a logistical regression to evaluate risk factors, such as occupation, income, term, marital status, personal assets, loan-to-value (LTV), debt-to-income (DTI) and property type. This two-step process reduces error compared with a single-step model by taking factor interactions into account. Macroeconomic variables are not directly used in the scoring process, although unemployment affects default.

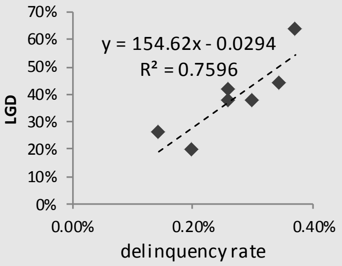
The nature of delinquency is of low severity due to decreasing RIF and first liens, but has long-tail risks as PD is not independent in adverse economic conditions. Moreover, PD and LGD are positively correlated, further increasing the long-tail risk. On the other hand, loss reserves are provisioned at short-tail on a PD-LGD basis, which creates the need for insurers to maintain a strong capital base and contingency reserves.

Example of a Tree Model



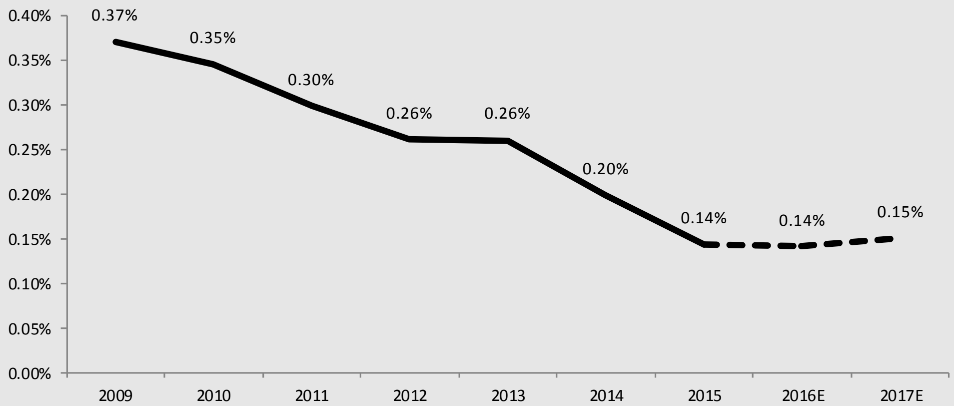
Source: HTI

Zenkoku's Delinquency versus Severity



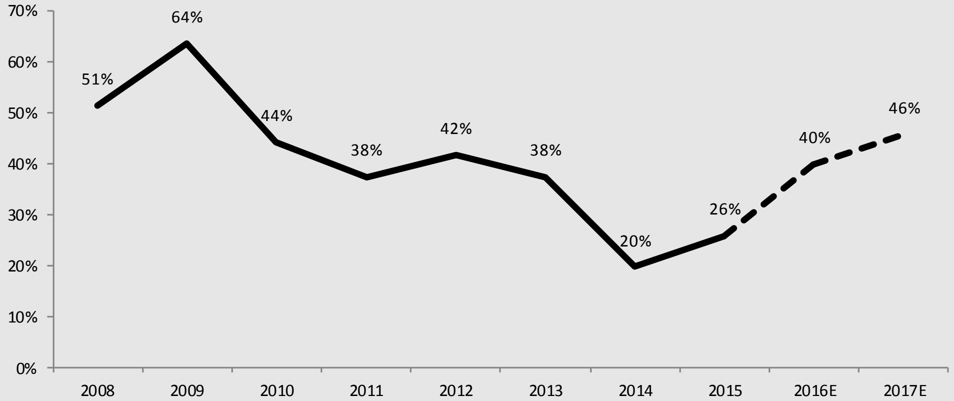
Source: Company data

Zenkoku's Delinquency Rates



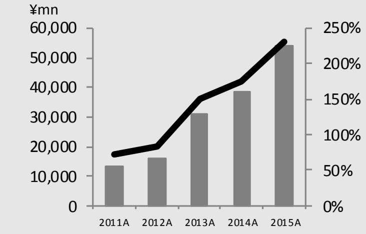
Source: Company data and estimates

Zenkoku's Historical Loss Given Delinquency Rates



Source: Company data, Bloomberg, HTI estimates

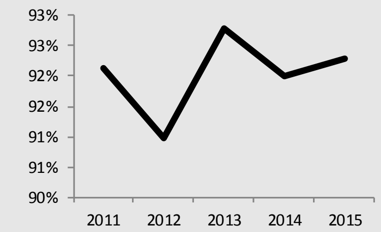
Zenkoku's Solvency Margin and Ratio



Source: Company data, HTI estimates

A solvency margin above 200% is considered healthy in Japan

Zenkoku's Persistency



Source: Company data, HTI estimates

IIF is growing at an impressive pace in our view, creating a large book of UPR to be released in future years

Zenkoku's Capital and Risk Metrics (¥mn)

	2011A	2012A	2013A	2014A	2015A	Note
A. Solvency margin ratio	73%	83%	149%	176%	230%	B/(0.5 x H)
B. Solvency margin	13,455	16,177	31,140	38,757	53,923	C-D-E+F+G
C. Book equity	21,926	24,099	39,339	47,288	60,522	
D. Future income tax asset	8,471	7,922	8,199	8,531	6,587	
E. Unrealized gains on available for sale	-1,333	-963	-352	-304	123	
F. Fluctuation and conteingency reserves	0	0	0	0	0	
G. Unrealized gains on available for sale 90%	-1,333	-963	-352	-304	111	
H. Risk amount	37,044	38,911	41,670	44,154	46,890	$\sqrt{(I^2+J^2)}+K$
I. Fat-tail insurance risk	36,005	37,840	40,605	43,082	45,799	Assumed 50bps of IIF
J. Investment risk	1,674	2,331	2,297	2,500	2,890	Assumed 5% of investments
K. Operational risk	1,000	1,000	1,000	1,000	1,000	Assumed

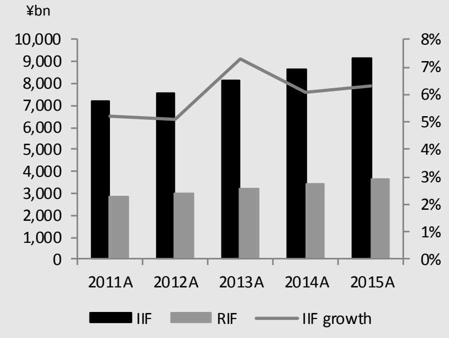
Source: Company data, HTI estimates

Financial Overview

Revenue consists mostly of NPE, which is a combination of premiums earned on newly written policies and recognition of UPR written in prior periods.

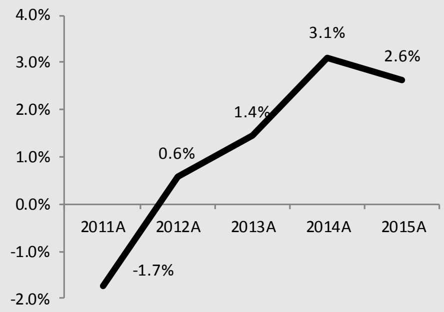
The level of NPE for policies written in prior periods depends on persistency. Persistency refers to the percentage of IIF that remains on the books from one period to the next (with a period usually defined as 12 months). Persistency changes depending upon prepayments, defaults and other factors. The impact of persistency can be positive or negative depending upon the premium payment method. When single-premium policies are cancelled, Zenkoku can immediately release UPR, resulting in accelerated profitability. For monthly premiums, policy cancellation extinguishes a premium stream and decreases profitability.

Zenkoku's IIF



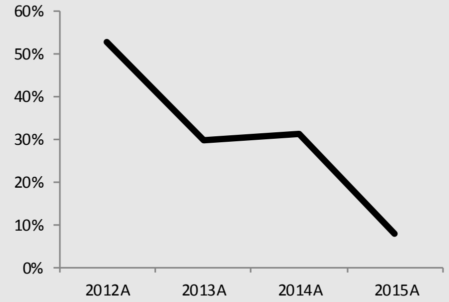
Source: Company data

Zenkoku's Investment Returns



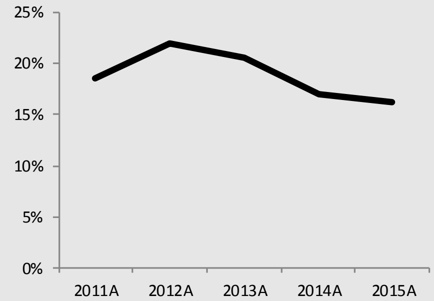
Source: Company data

Zenkoku's Loss Ratio



Source: Company data, HTI estimates

Zenkoku's Expense Ratio



Source: Company data

Comparison with City Bank Captive Insurers

We estimate that Zenkoku's IIF is slightly behind Mizuho Credit Guaranty (unlisted). Zenkoku's independence provides it with the ability to establish a diversified MI book sourced from various lenders, but it also makes Zenkoku dependent upon business referrals

Independence exposes Zenkoku to adverse selection, but its access to personal data and evaluation know-how help mitigate information asymmetry

and exposes it to adverse selection. City bank captive insurers benefit from large automatic flows of high-quality mortgage borrowers and from cost synergies with group companies.

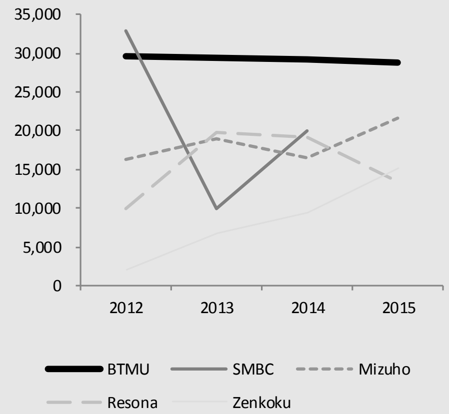
Among the four city bank captive entities, Zenkoku's MI book is closest in size to Mizuho Credit Guaranty. Considering Mizuho's PD-LGD assumptions, we believe Zenkoku can match Mizuho Credit Guaranty's net income in the future if it successfully scales its business to increase IIF and bring down its expense ratio.

Adjusting differences in size in proportion to Zenkoku's FY3/15 revenue, we calculate Mizuho Credit Guaranty's income at about ¥17,180mn in FY3/15, 14% higher than that for Zenkoku. We expect Zenkoku to be able to narrow this difference as it gains access to high-quality borrowers and expands its scale.

The effects of transfer pricing and cost synergies are ignored

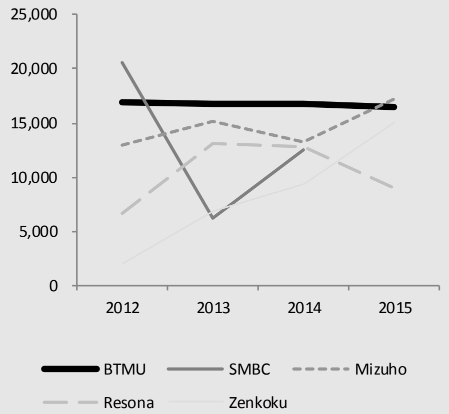
Zenkoku has more capital flexibility than other captive insurers in terms of loss reserving

Profit Comparison of MI Providers



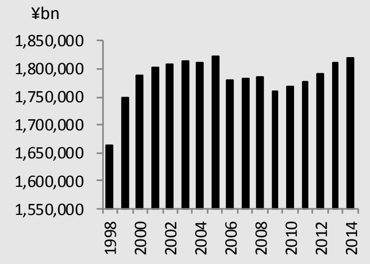
Source: Bank data

Profit Comparison of MI Providers Adjusted by Size



Source: Bank data, HTI estimates

Outstanding Mortgage Balances



Source: Bank of Japan

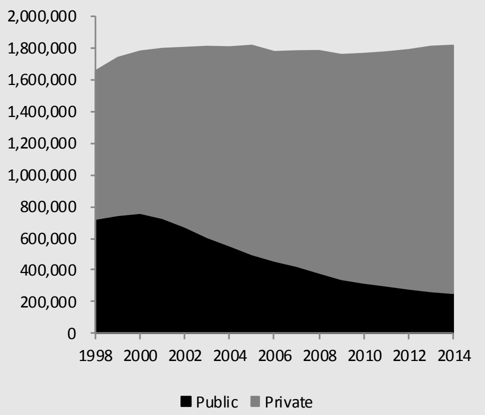
Banks, especially city banks, significantly expanded market shares as JHFA retreated

Overview of Japan's Mortgage Insurance Industry

Private MI policies are written on Japanese residential first-liens to mortgage lending institutions, including banks, *shinkin*, and JA. MI is a form of credit insurance where a lender is insured against delinquency by the borrower. The MI premium is paid for by the borrower. In Japan, MI is underwritten on a flow basis. Unlike in other countries, almost all mortgages in Japan require MI, regardless of LTV.

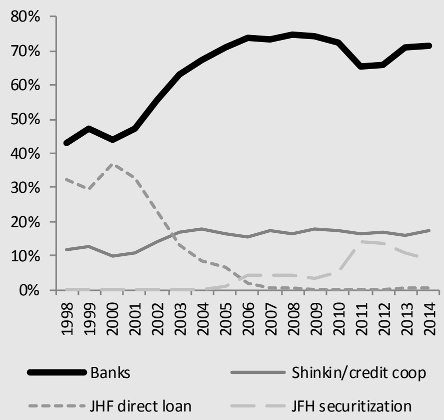
The Japan Housing Finance Agency (JHFA) provides fixed-rate mortgages (called Flat 35) by purchasing confirming mortgages from originating banks and securitizing these into mortgage-backed securities. The role of public mortgage financing has diminished significantly, accounting for just 14% of total mortgages outstanding in 2014 from 30% in 2004.

Private versus Public Mortgage Lending in Japan



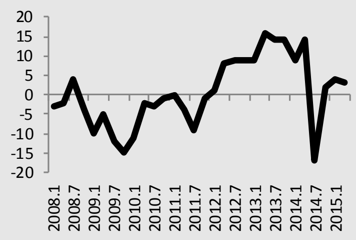
Source: JHFA, Bank of Japan

Mortgage Market Share by Lender Type



Source: JHFA, Bank of Japan

Mortgage Demand Index



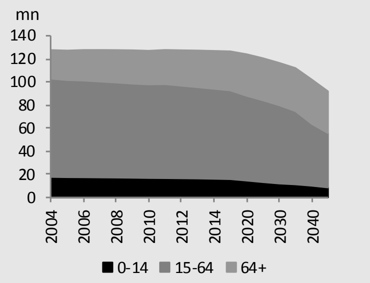
Source: Bank of Japan

Future of Japan's Mortgage Market

The total mortgage outstanding balance in 2014 was ¥182trn, versus ¥181trn in 2004. Demand for housing is directly related to population and economic growth. We expect mortgage demand to be robust in the near term as the number of households rises and economic activity remains healthy.

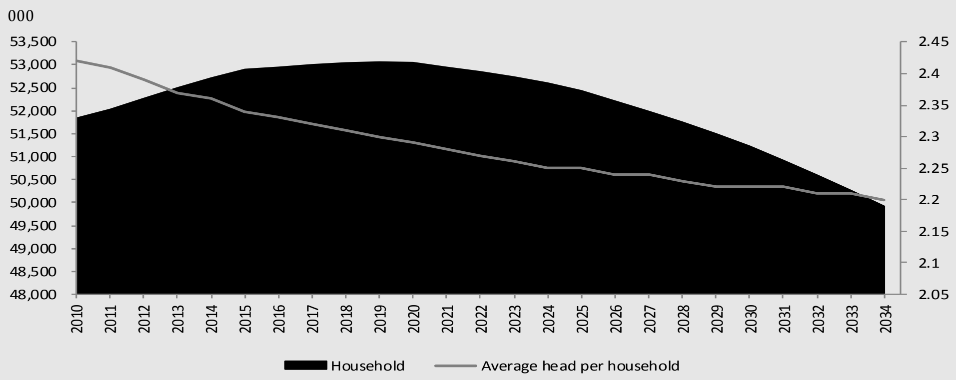
However, we expect mortgage origination to decrease from 2020 as a result of declining population and a drop in the number of households. Fewer households should result in reduced demand for housing units, while declining household size should translate into a drop in relative demand for large single-family units.

Japan Population and Age Demographics



Source: Statistics Japan, Institute of Population Research

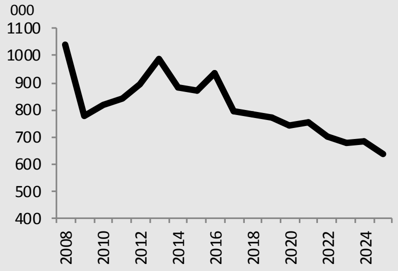
Number and Size of Households in Japan



Source: Institute of Population Research

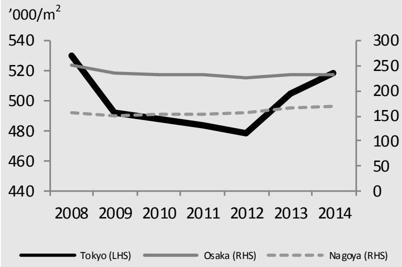
Mortgage origination declined from ¥29.7trn in 1998 to ¥20.8trn in 2014, due to a prolonged recession and a decrease in the working-age population. To project future origination, we have used a simple cross-sectional relationship, assuming mortgage demand changes at 200% of household growth, 20% of nominal GDP growth, and 10% of headline inflation. We use the GDP growth and inflation rate estimates from Societe Generale's *Global Economic Outlook* published on 1 June 2015. We assume these three independent factors are normally distributed and apply uncertainty to simulate potential origination size.

Japan Housing Starts



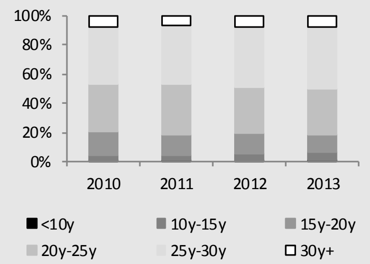
Source: Ministry of Land, Mitsubishi UFJ Research

Japan Property Prices by Metropolitan Areas



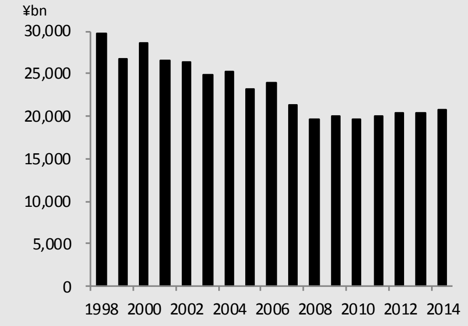
Source: Ministry of Land

Japan Mortgage Breakdown by Term



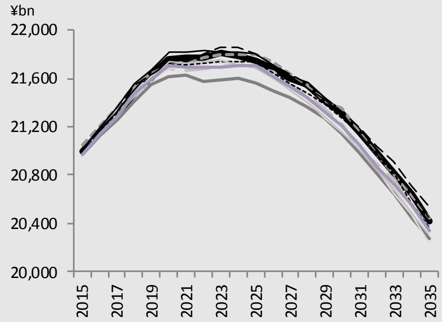
Source: JHFA

Historical New Mortgage Origination



Source: Bank of Japan, JHFA

Simulated Future New Mortgage Origination

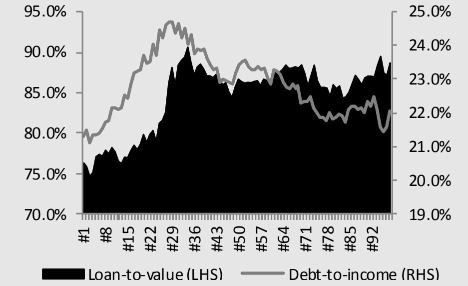


Source: HTI estimates

Mortgage Characteristics

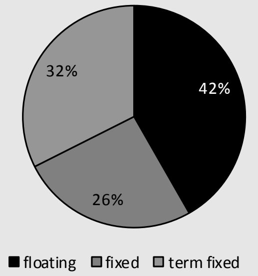
Analyzing JHFA's sponsored mortgage-backed securities indicates that most Japanese mortgages are high-ratio mortgages (i.e., mortgages with small down payments) with the majority above 85% loan-to-value at origination. On the other hand, the debt-to-income ratio is low because of high relative affordability, low volatility, and long mortgage maturities in Japan's housing market. This backdrop suggests that a prolonged property market decline and unemployment would be the major factors in delinquency. More than 80% of mortgages have maturities above 20 years at origination, with roughly 70% of these repaid within 15 years from origination.

Japan LTV and DTI



Source: JHFA

Japan Mortgages by Rate Type



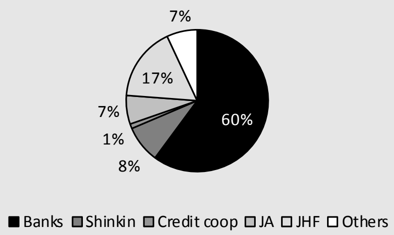
Source: JHFA

Key Mortgage Lenders and MI Penetration

Private mortgage lenders accounted for ¥157trn (86%) of the ¥182trn mortgage balance outstanding in 2014. Banks collectively hold the largest market share, accounting for about 63% of total mortgages or 74% of the private lender market.

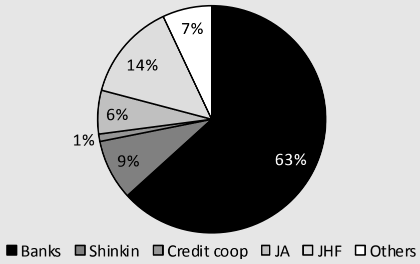
Bank lenders can be classified into city banks, tier-1 regional banks, tier-2 regional banks, and trust banks. City banks are the dominant lenders, with about a 50% share of bank lending in 2014. Tier-1 regional banks such as the Bank of Yokohama (8332 JP, ¥787, NR) and the Chiba Bank (8331 JP, ¥980, NR) had mortgage market shares of just 3–4% in 2014, indicating fragmentation of the remaining market.

Mortgage Market Shares in 2011



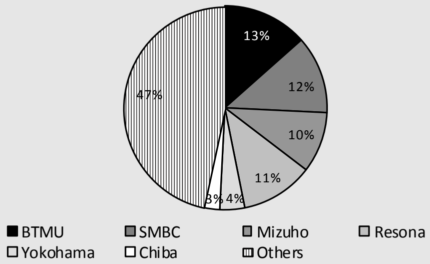
Source: Bank of Japan, JHFA

Mortgage Market Shares (2014)



Source: Bank of Japan, JHFA

City Bank Shares of Bank Mortgage Lending (2014)



Source: Bank data, Bank of Japan

Japan's banks have traditionally priced the interest rate and credit portions of mortgages separately. Lenders generally have designated MI providers for each type of mortgage and borrowers are required to purchase from the designated providers. MI premiums are paid either up front in a single premium or monthly as a pre-determined percentage of IIF. Almost all banks have captive credit insurance firms, either wholly or jointly owned. These captive insurers are generally the default MI providers for all the banks' mortgage products.

Captive insurers guarantee mortgages originated by their parent entities

All banks' captive insurers are domiciled in Japan and we speculate that only a small number provide tax or capital weighting benefits

Major Mortgage Lenders and Captive Insurers

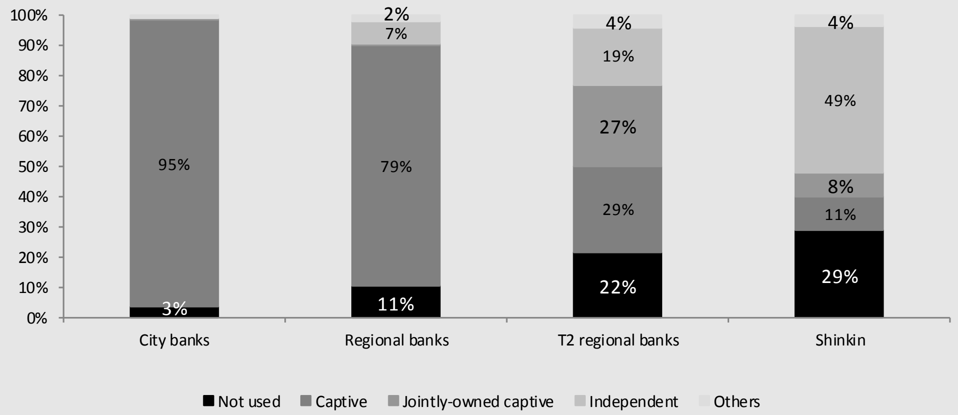
Banks	Captive Insurers
Bank of Tokyo Mitsubishi UFJ	Mitsubishi UFJ Mortgage Guaranty
Sumitomo Mitsui Bank	SMBC Credit Guaranty
Mizuho Bank	Mizuho Credit Guaranty
Resona Bank	Resona Guaranty
Sumitomo Mitsui Trust Bank	Sumitomo Mitsui Trust Guaranty
Shinsei Bank	N/A
Bank of Yokohama	Yokohama Credit Guaranty
Bank of Chiba	Chibagin Guaranty
Shizuoka Bank	Shizugin Credit Guaranty
Bank of Kyoto	Kyoto Credit Guaranty
Fukuoka FG	Fukugin Hosho

Source: Bank data

As a result of their large scale, credit assessment expertise, and high quality customers, city banks have not used independent MI, while regional banks selectively outsource their credit risk on a limited scale. Tier-2 regional banks and *shinkin* tend to use independent MI providers because their customers and portfolios are likely to be riskier and more concentrated than those of city banks.

The proliferation of MI in Japan is highly dependent on its acceptance and usage by city banks and major regional banks

Japan MI Use by Type of Financial Institution



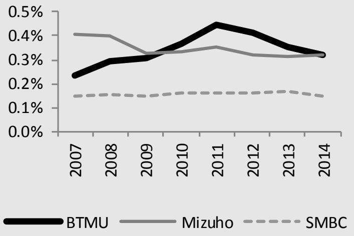
Source: JHFA 2014 Mortgage Market Survey

In our projection of future market shares, we expect the urban-rural disparity to accelerate considering deteriorating demographics, benefiting city banks due to their urban concentration and strong funding advantages. We see a diminishing role for JHFA as interest rate volatility increases in the post-monetary easing environment, raising investor yields. We expect the city banks share of the private mortgage market to rise to 38% in 2035 from 30% in 2014.

Historical Delinquency Rates

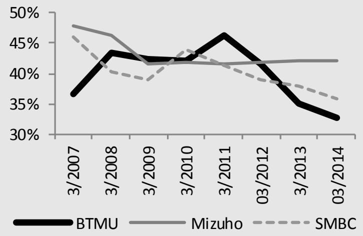
Even though the average LTV ratios are high, delinquency rates in Japan are low. Even during the post-credit crisis recession, delinquency rates were below 50bps for banks. For *shinkin*, we believe delinquency was only about 100bps. Some major reasons for the low delinquency rates in our opinion are low unemployment rates, generally high job security, low debt-to-income ratios, low property price volatility, and low interest rates. We believe Japanese culture is one of the important reasons, if not the most, for the ultra-low delinquency rate, although this theory cannot be tested.

Loss Assumptions by Megabanks



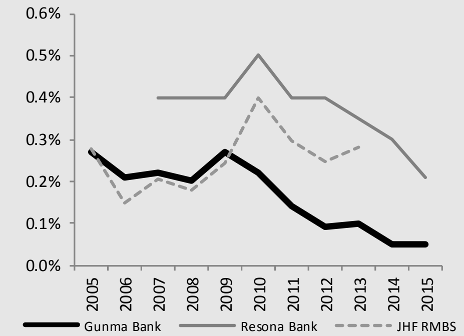
Source: Bank data

LGD Assumptions Used by Megabanks



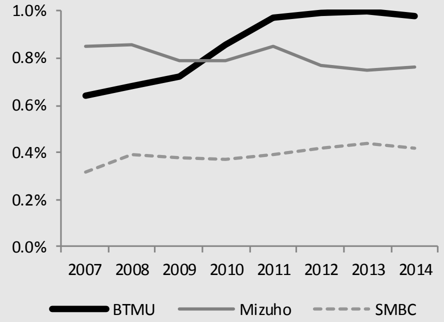
Source: Bank data

Japan Mortgage Delinquency Rates



Source: Bank data, JHFA, HTI calculation

Delinquency Assumptions Used by Megabanks



Source: Bank data

International Comparison

There is no mandatory MI requirement in Japan regardless of LTV ratio. JHFA only provides credit guarantees for confirming fixed-rate mortgages, so floating-rate mortgages rely on private-sector MI providers.

In the US, Canada, and other jurisdictions, mortgages with LTV above 80% are automatically considered risky and are legislatively required to obtain MI. With credit risks priced into mortgage rates and lenders not generally requiring MI for low-ratio mortgages, the private MI markets tend to be small (except in the US).

We see capital relief as the second most important driver for MI growth, but Basel 3 currently provides no such relief

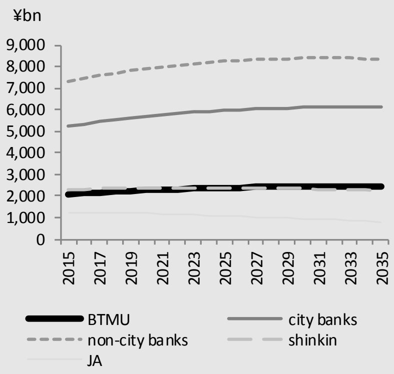
Comparison of International MI Requirements

	Japan	US	AU	CA	HK	UK
Extensive use of MI	Yes (mostly captive)	Yes	Yes	Yes	Yes	No
Government involvement	Yes (only fixed-rate)	Yes	No	Yes	Yes	No
Full coverage	Yes	No	Yes	Yes	No	No
Mandatory for high ratio	No	Yes	No	Yes	Yes	No
Capital relief	Yes	Yes	Yes	Yes	Yes	Yes

Source: HTI, Federal Housing Administration, Hong Kong Mortgage Corporation

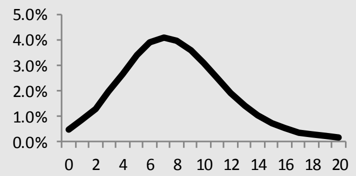
In the run-up to the credit crisis, US mortgage lenders set up captive insurance companies in an attempt to internalize the credit premium. For high ratio mortgages which required MI by legislation, lenders referred the underwriting to an external primary insurer. The captive entities then entered into reinsurance with the insurer for a portion of the premiums to allay the credit risk.

Origination by Lender Type



Source: HTI estimates

Illustration of Decay Rate



Source: HTI estimates

We assume Zenkoku begins to sign agreements with one city bank over the next 2–3 years

We see Zenkoku underwriting 40–50% of *shinkin* mortgages by 2035

Financial Outlook

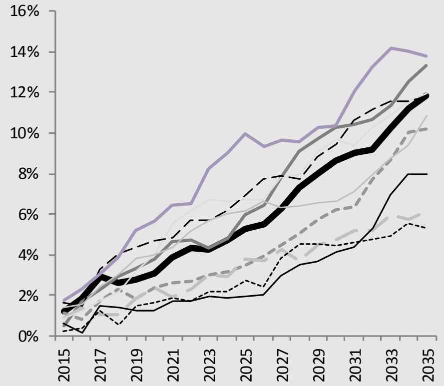
To project Zenkoku's financial performance, we have utilized our projected total mortgage origination market size. We have then broken the market down into city banks, non-city banks (i.e., trust banks and regional banks), *shinkin*, JA, and other lenders. We have applied our estimated annual market share growth rate for each lender type to derive an estimated mortgage origination size for each group. We have then applied our assumed Zenkoku market shares for each lender group to reflect its established position with *shinkin*, but its low penetration of banks (although we have assumed Zenkoku's share grows for all lender groups, with uncertainty incorporated via normally distributed random residuals). Our projected NIW for Zenkoku is the sum of the products of our estimated origination sizes and its market shares in each lender group. We use a projection period of 2015–2034, giving 20 vintages.

We assume a 20-year run-off period for policies written in each of the 20 vintages. The IIF, UPR, loss provisions, and earned premiums are tracked for all vintages until they are run off. This implies IIF is completely run off by 2054 (i.e., the last policy in 2034 runs for 20 years).

Because of prepayments, defaults, and other cancellation events, we have incorporated an annual "decay rate" into our analysis. The "decay rate" is defined as the percentage of IIF reduced each year not due to scheduled repayments. It is widely accepted that the default rate and prepayment rate peak before the policy reaches its mid-point, and then declines.

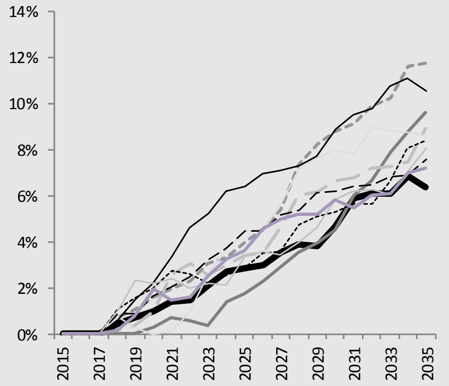
Our estimates of Zenkoku's penetration rates for each major lender type are shown in the charts below, with 10 simulated paths represented in each chart.

Zenkoku Penetration in Mitsubishi UFJ (10 Simulations)



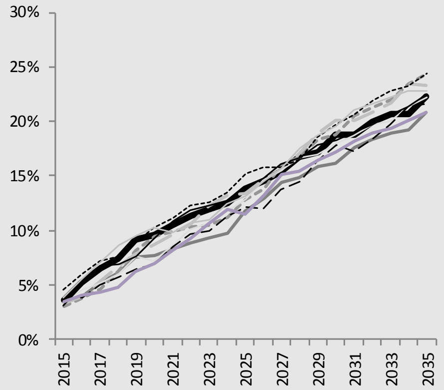
Source: HTI estimates

Zenkoku Penetration in Other City Banks (10 Simulations)



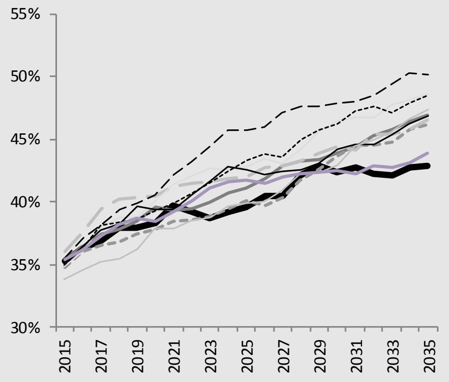
Source: HTI estimates

Zenkoku Penetration in Regional Banks (10 Simulations)



Source: HTI estimates

Zenkoku Penetration in *Shinkin* (10 Simulations)

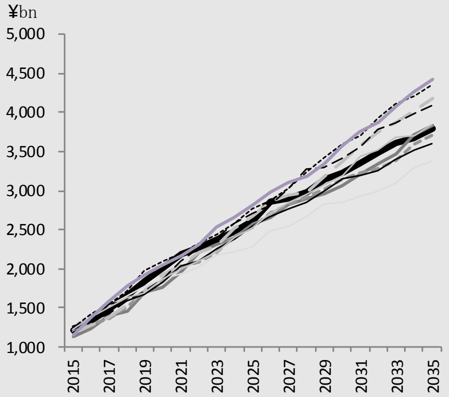


Source: HTI estimates

Our expectation that Zenkoku swims against the currents and realizes alpha-driven growth is the key assumption behind our target price and current valuation

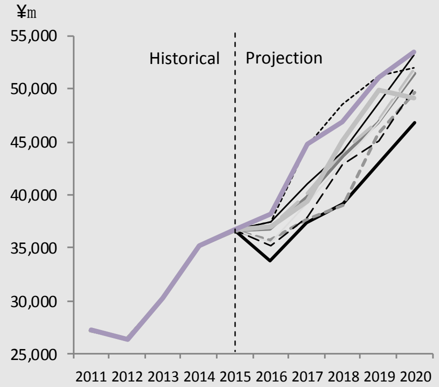
Given our assumption that it gains market shares across lender types, we expect Zenkoku to continue to increase its NIW and IIF every year even though we see the mortgage origination market shrinking over the medium term. The company's continued gain in market share is the most critical assumption behind the achievement our target valuation. Any loss of share gain momentum would put our investment thesis at risk.

Zenkoku's New Insurance Written



HTI estimates

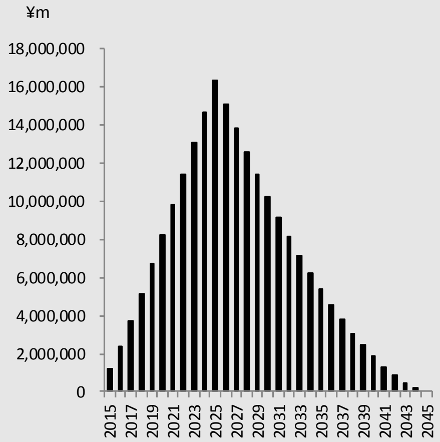
Zenkoku's Net Premium Written



Source: Company data, HTI estimates

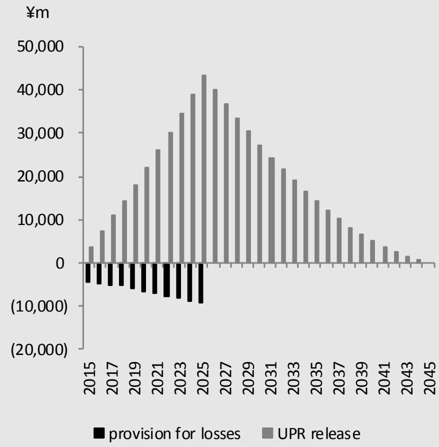
Below we demonstrate a potential path of Zenkoku's MI book, consisting of policies written during 2015–25. Our chart shows that the book completely runs off in 20 years.

Zenkoku's IIF During 2015–25



Source: HTI estimates

Zenkoku's NPE During 2015–25



Source: HTI estimates

Valuation

Our target price of ¥5,450 is derived using the simple average of an implied PBR based on global peers' PBR-to-ROE, a fair PEV multiple based on an assumed RoEV, and our estimated appraisal value (AV).

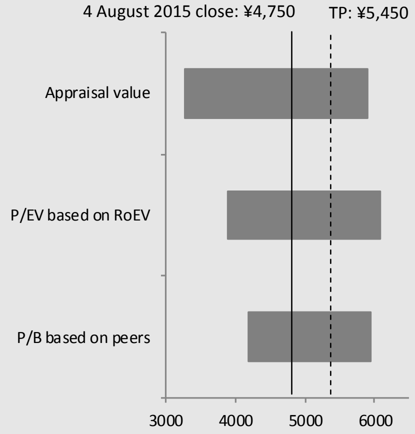
Our PBR analysis values Zenkoku at ¥371,590mn or ¥5,396 per share. PEV analysis estimates a value of ¥378,530mn or ¥5,497 per share. AV analysis suggests a valuation of ¥375,800mn or ¥5,457 per share.

If investors misunderstand the growth trajectory of the MI business model, there is a risk the stock might be sold off due to lack of earnings momentum, even if Zenkoku successfully grows its NIW

We see Zenkoku as a company that posts slow and gradual growth with the majority of its value created in the long term, and that has an established stock-business model and stable source of revenue. Its core earnings are stable and visible, but net income is subject to volatile provision revisions. Due to the long-maturity and long-tail nature of the MI business, it is difficult to grow core earnings strongly in the near term, so the current high PER cannot be justified based on growth even if NIW expands significantly. As a result, PBR and PEV are our primary valuation yardsticks.

Continued growth has already been priced in so Zenkoku would need to deliver strong NIW growth as well as meet its guided earnings to satisfy heightened investor expectation

Zenkoku Valuation Ranges



Source: HTI estimates

Zenkoku Valuation Multiples (4 August 2015)

	Last close	Our TP	Consensus*
Price	4,750	5,450	5,100
P/E-15A	21.6	24.8	23.2
P/E-16E	20.4	23.4	21.0
P/E-17E	20.4	23.4	19.7
P/B-15A	5.4	6.2	5.8
P/EV	3.1	3.6	3.3
P/VNB	1.3	1.4	1.3

*Bloomberg consensus target price and analyst forecasts

Source: Bloomberg, HTI estimates

Comparable Companies

Given that Zenkoku is the only independent MI provider in Japan, we view nonlife insurers as the closest domestic peer group in term of the nature of the business. Even though MI and nonlife insurance differ in duration, they have similar product risk, liability uncertainty, and loss provisioning characteristics. We see Tokio Marine Holdings (8766 JP, ¥5,123, NR), MS&AD Insurance (8725 JP, ¥3,871, NR), and Sompo Japan Nipponkoa Holdings (8630 JP, ¥4,316, NR) as Zenkoku's peers. To facilitate comparison, we have adjusted the book values for these companies as below.

We have reclassified contingency reserves and certain liabilities for nonlife insurers as equity capital to facilitate comparison with Zenkoku

Zenkoku's Peer Book Value Adjustments

(¥bn)	Fluctuation reserves	CAT reserves	VIF of life subsidiary	Mark-to-market PL	DAC	Goodwill	Adjusted book
Tokio	83	982	622	114	276	146	5,069
MS&AD	137	679	452	246	264	85	4,343
SJNK	54	551	499	240	210	84	3,024

Source: Company data, HTI

Insurers are subject to strict capital regulations, resulting to large balance sheets and low PBR

Zenkoku's peers trade on significantly less than 1.0x book mainly due to their large balance sheets, their sizeable capital bases, and their low profitability. As a result, the peers' PBRs are not appropriate in valuing Zenkoku in our view. Instead, we only use the median earnings yields of 5.8% of the peer group as Zenkoku's cost of equity.

We have instead chosen global MI providers as Zenkoku's most appropriate peer group.

Peer Valuations (4 August 2015)

Company	Share Price	Market Cap	Valuation Multiples: Price / Earnings 2016E	2017E	Price / Adjusted Book 2015A	2016E	Returns: Adjusted ROE	Dividend 2016E	Profitability: Loss ratio 2015A	Exp ratio 2015A
Japan: P&C Insurers										
Tokio Marine	5,112	3,880,615	15.3x	13.4x	0.77x	0.74x	6.1%	2.1%	58.5%	32.2%
MS&AD	3,860	2,362,950	15.0x	13.7x	0.54x	0.53x	3.8%	1.9%	62.6%	33.2%
SJNK	4,300	1,750,007	12.6x	11.4x	0.58x	0.56x	1.8%	1.8%	65.6%	31.8%
Mean			14.3x	12.8x	0.63x	0.61x	3.9%	1.9%	62.2%	32.4%
Median			15.0x	13.4x	0.58x	0.56x	3.8%	1.9%	62.6%	32.2%
Global: Mortgage Insurers										
MGIC Investment	11.03	3,746	8.9x	8.9x	3.35x	2.44x	16.5%	0.0%	58.8%	14.7%
Radian Group	18.42	3,842	10.8x	8.9x	1.88x	1.60x	15.1%	0.0%	29.1%	29.6%
Essent Group	29.28	2,713	17.7x	13.5x	2.85x	2.46x	15.9%	0.0%	2.8%	43.6%
Genworth MI Canada	30.95	2,839	8.0x	8.6x	0.96x	0.89x	10.2%	4.8%	20.0%	19.0%
Genworth MI Australia	3.56	2,347	8.7x	9.1x	0.94x	0.94x	10.4%	11.3%	18.4%	7.1%
Mean			10.8x	9.8x	2.00x	1.66x	13.6%	3.2%	25.8%	22.8%
Median			8.9x	8.9x	1.88x	1.60x	15.1%	0.0%	20.0%	19.0%

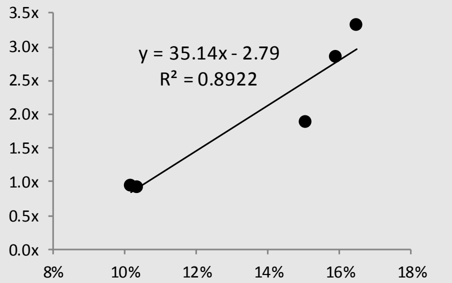
Source: Bloomberg, Company data, HTI estimates

Our assumed sustainable ROE is higher than our projected ROE for FY3/17 and FY3/18, but we view it as achievable if Zenkoku optimizes its equity base

To account for differences in business cycles and returns, we have regressed the peer PBRs on their ROEs and then applied Zenkoku's long-term ROE as the independent variable to estimate an implied PBR. We see Zenkoku's ROE declining in the near term as book value is set to grow faster than earnings, but we believe the company is likely to enhance ROE via share buy-backs and balance sheet management. We assume a long-term sustainable ROE of 22.5%, which suggests a regressed PBR of 5.12x, with a 66% probability confidence interval between 4.25x and 5.69x. We have applied a 20% premium to Zenkoku to reflect its lack of competition, its lower loss ratios than selected peers, its lack of unprofitable MI vintages, its lower cost of equity, and the absence of capital regulations.

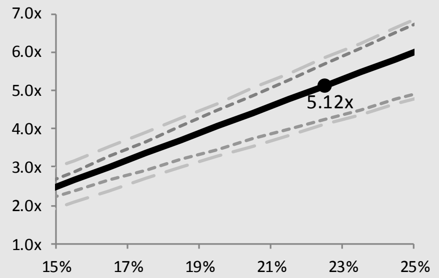
Zenkoku's ROE is beyond the data range of the regression, resulting in high out-of-sample standard error, so the confidence interval and prediction interval widen as ROE rises

Global Mortgage Insurers' PBR-to-ROE Regression



Source: Company data

Regressed PBR and 66% Confidence Band



Source: Company data, Bloomberg, HTI estimates

Using Zenkoku's latest book value of ¥60,522mn for FY3/15, we estimate a value of ¥371,590mn or ¥5,396 per share.

Embedded Value and Appraisal Value

Although embedded value is not reported by nonlife insurers and mortgage insurers, we believe it is superior to book value in capturing the value of in-force (VIF) of Zenkoku's large IIF accumulated to date. We have estimated the VIF using a 10-year run-off period. Our estimated EV is ¥105,040mn, of which ¥45,010mn is from VIF (see table below).

Zenkoku VIF

(¥mn unless specified)	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Insurance in force (¥bn)	8,839	7,761	6,752	5,799	4,893	4,022	3,181	2,363	1,563	777	0
Persistence	87%	87%	86%	84%	82%	79%	74%	66%	50%	0%	0%
Unearned premium reserves	136,119	109,935	86,946	66,944	49,765	35,272	23,357	13,933	6,932	2,301	0
Premium earned	26,184	22,990	20,001	17,179	14,493	11,915	9,424	7,001	4,631	2,301	0
(+) Investment income	265	233	203	174	147	121	95	71	47	23	0
(-) Incurred losses	5,237	4,598	4,000	3,436	2,899	2,383	1,885	1,400	926	460	0
(-) Expenses	4,189	3,678	3,200	2,749	2,319	1,906	1,508	1,120	741	368	0
(-) Tax	5,618	4,932	4,291	3,686	3,109	2,556	2,022	1,502	994	494	0
Earnings	11,405	10,014	8,712	7,483	6,313	5,190	4,105	3,050	2,017	1,002	0
PV earnings	11,093	9,215	7,584	6,163	4,919	3,826	2,862	2,012	1,259	592	0

Source: HTI estimates

Zenkoku Adjusted Net Worth Calculation

Adjusted net worth	**60,031**
Book equity	60,522
(+) Hidden reserves	0
(+) Deferred acquisition cost	0
(-) Assets with no realizable value	491

Source: Company data, HTI estimates

Our calculation of capital cost tied to run-off and adjusted net worth (ANW) appears in the table below.

Zenkoku Cost of Capital

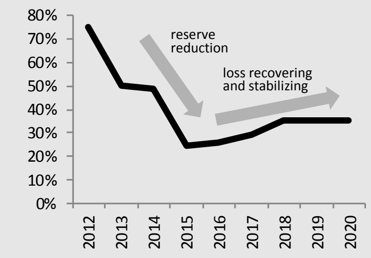
(¥mn unless specified)	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Required capital for in-force	17,678	15,522	13,504	11,599	9,785	8,045	6,363	4,727	3,127	1,554	0
Capital charges	1,008	885	770	661	558	459	363	270	178	89	0
PV capital charges	981	814	670	545	435	338	253	178	111	52	0

Source: HTI estimates

ANW is close to reported book value because of the lack of adjustments required

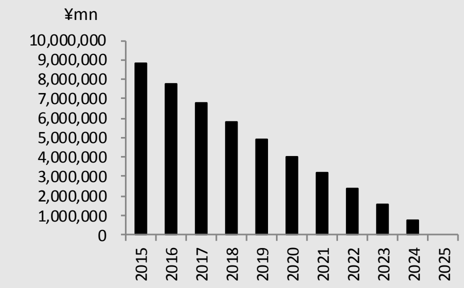
We have derived our ¥105,040mn embedded value by summing the ANW of ¥60,031mn with the VIF of ¥49,430mn and deducting cost of capital of ¥4,420mn. The run-off patterns are shown in the charts below.

Zenkoku Combined Ratios



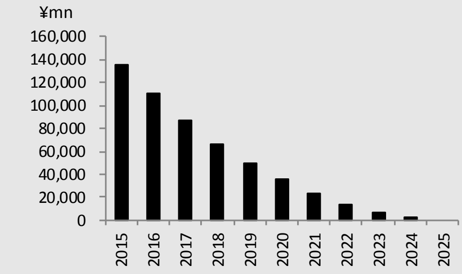
Source: Company data, HTI estimates

Zenkoku Insurance In Force



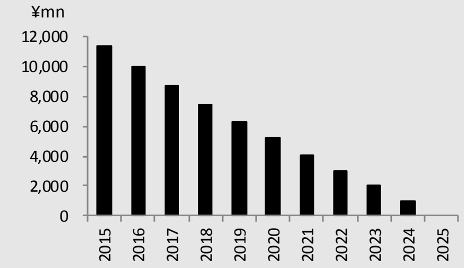
Source: HTI estimates

Zenkoku Unearned Premium Reserves



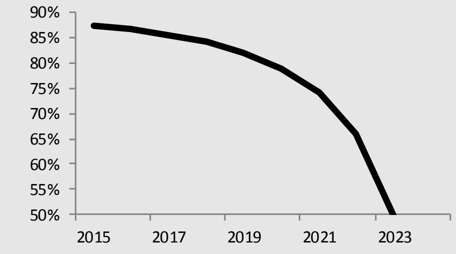
Source: HTI estimates

Zenkoku Net Earnings



Source: HTI estimates

Zenkoku Persistency



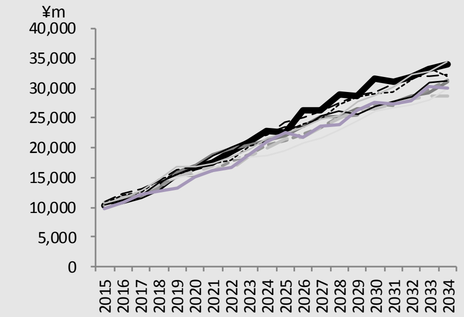
Source: HTI estimates

We use assumed cost of equity as our terminal exit multiple

To calculate AV, we first estimated VNB. For our VNB estimation, we utilized our projected origination market sizes, market shares, NIW, and NPE for 2015–34. Using our estimated loss and expense ratios, we derived a series of net earnings estimates from each of the 20 vintages. By discounting future net earnings to origination, we then obtained a policy value for each vintage at origination. By discounting each policy value to the present and applying an exit multiple to the last projected earnings, we obtained an estimated VNB.

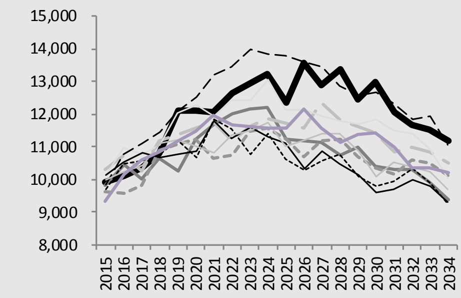
Share loss is reflected only at the 1% probability level, so policy value increases monotonically unless it hits the 1% threshold

Zenkoku 10 Simulated Policy Values



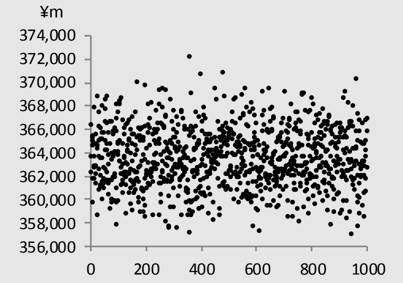
Source: HTI estimates

Zenkoku 10 Simulated Discounted Policy Values



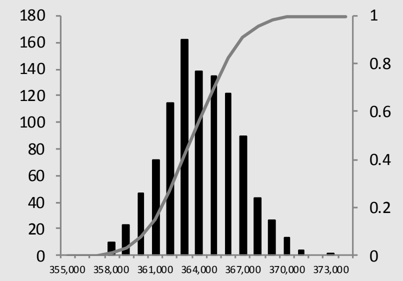
Source: HTI estimates

Zenkoku 1,000 Simulated Appraisal Values



Source: HTI estimates

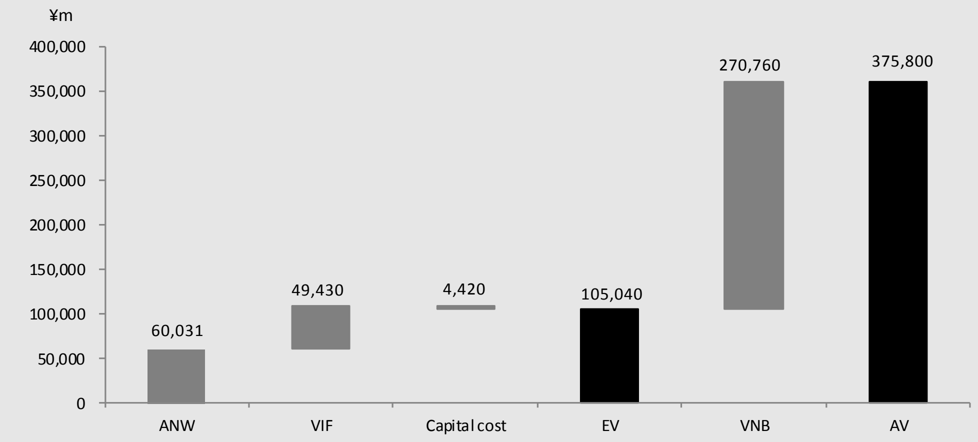
Distribution of Simulated Appraisal Values



Source: HTI estimates

We estimate VNB at ¥270,760mn. Adding this to our estimated EV of ¥105,040mn gives an AV figure of ¥375,800mn. Our AV is the average of 1,000 simulated results.

Zenkoku EV and AV



Source: HTI estimates

Using alternative cases to test sensitivities to our key assumptions makes it apparent to us that the market has already priced in a gain in share for Zenkoku in the bank origination market. Thus, to sustain the current valuation, it is critical that Zenkoku begins penetrating the bank market over the next few years and achieving a combined ratio below 40%. Otherwise, we think downside potential for the stock price could be as high as 28%.

By 2035, our base case assumes Zenkoku has shares of about 10% and 27% in city banks and regional banks, respectively

If a more modest growth scenario is realized, the stock price would likely experience downward pressure

Key Projection Assumptions and Sensitivities for Zenkoku

Base ¥375,800m ¥5,457/share	● BTMU annual share gain: 0.40% ● Other city bank annual share gain: 0.50% ● Regional bank annual share gain: 1.00% ● *Shinkin* annual share gain: 0.50% ● Loss ratio: 20% ● Expense ratio: 16%
Bull ¥405,910m ¥5,895/share	● BTMU annual share gain: 0.60% ● Other city bank annual share gain: 0.65% ● Regional bank annual share gain: 1.20% ● *Shinkin* annual share gain: 0.80% ● Loss ratio: 18% ● Expense ratio: 15%
Bear ¥225,350m ¥3,273/share	● BTMU annual share gain: 0.20% ● Other city bank annual share gain: 0.35% ● Regional bank annual share gain: 0.40% ● *Shinkin* annual share gain: 0.30% ● Loss ratio: 30% ● Expense ratio: 25%

Source: HTI estimates

If either bank share gain or short-tail credit loss does not materialize, we see strong reasons to re-rate the stock

Sensitivity Analysis for Our Estimated AV

Source: HTI estimates

Fair Market Capitalization-to-EV

For FY3/15, we estimate Zenkoku's RoEV at 14.4%. We believe Zenkoku can sustain an RoEV of 11.0% by proactively optimizing the equity capital base. Using an 11.0% RoEV and 47% EV margin, we have estimated a fair market capitalization-to-EV of 3.6x, suggesting a valuation of ¥378,530mn using our estimated EV of ¥105,040mn.

Risks to the Attainment of Our Target Price

Over the medium term, an overly conservative balance sheet would likely impact ROE and lead to a stock re-rating

As the stock price has risen about 38% so far this year, gradual gains in bank market share appear to already be priced in, making Zenkoku vulnerable to disappointments. We see weak growth in bank market share as the main downside risk. The market would likely react negatively if Zenkoku were to fail to report business from the Bank of Tokyo Mitsubishi UFJ or if it were unsuccessful in signing master policies with the remaining city banks. Mortgage credit market deterioration leading to increased delinquency would also impact our outlook of low credit losses.

In the long term, we believe weak mortgage demand could have a material negative impact on Zenkoku

The impacts of declining population and households could significantly outweigh any benefits from economic growth and inflation, resulting in less NIW than we expect

We also see risk if investors misunderstand Zenkoku's business model and expect stronger earnings growth than is feasible, as NIW growth should translate into earnings only gradually.

Revenue Growth

We expect steady growth in NPW driven by slightly increases in mortgage origination and Zenkoku's market share gains, translating into NPE of ¥30,900mn for FY3/16 and ¥31,600mn for FY3/17. Over the medium term, we expect mortgage origination to decline with Zenkoku having to grow its NPW by gaining market share from banks captive insurers.

Profit Margins

We forecast combined ratios of 26% for FY3/16 and 29% for FY3/17. We forecast the loss ratio rises slowly to 20% by FY3/18 to account for credit cyclicality and we see the expense ratio improving to 16% from FY3/18 due to expanding scale, resulting in a combined ratio of 36% from FY3/18.

Shareholder Returns

Management is committed to a 22% dividend payout ratio. Although we believe it is prudent to establish a contingency reserve even though the company is not subject to capital requirements, we think the company could spend more actively to buy back shares. We assume a 5% share buy-back in our projections.

Balance Sheet Risks

We see little balance sheet risk in the near term as reserves are sufficient at the short tail. The capital adequacy ratios look healthy. We estimate the reserves-to-expected loss-ratio was 275% and solvency margin ratio was 230% in FY3/15. However, given the high default correlation, in case of a long tail delinquency under severe macroeconomic stress, existing reserves do not appear to be sufficient and contingency reserves would have to be withdrawn.

Key Takeaway

Realization of bank market share gains and the non-occurrence of adverse macroeconomic shocks are the keys to our positive outlook for the shares

Investment Thesis – Target Price – Share Price Catalysts

We initiate coverage with a BUY rating and a target price of ¥5,450. We see Zenkoku as a slowly growing story that can capture market share from the banks captive insurers. Due to historically low default rates and high recovery rates in Japan, revenue has been stable and earnings visible, provided credit losses are sufficiently absorbed using short tail loss provisions. Assuming a similar credit environment going forward, we view MI as an attractive business model that offers a high risk-adjusted return.

Key stock price catalysts include the signing master policies with one of the city banks, the start of MI business with the Bank of Tokyo Mitsubishi UFJ, regulatory changes favorable to MI such as recognition of MI in Basel 3, and the continued improvement in the credit market.

IMPORTANT DISCLOSURES REGARDING THE SG – HAITONG INTERNATIONAL RELATIONSHIP

This report has been produced and distributed pursuant to a contractual agreement between Société Générale ("SG") and Haitong International Securities Group Limited ("Haitong International") for the production and distribution of research on certain Asia Pacific markets (the "Research"). The Research has been prepared solely by, and is issued, by Haitong International Research Limited ("HTIRL"), a Hong Kong affiliate of Haitong International. The Research is distributed by SG and its affiliates to its institutional clients globally (the "Recipients"), subject to the distribution and regional notices below. HTIRL also distributes the Research in a non co-branded format to Haitong International's domestic Chinese clients. Under the contractual agreement, SG pays Haitong a quarterly fee for production of the Research. SG also pays Haitong International for the marketing (sales support) of the Research a percentage of commissions received by SG in connection with trades executed by SG on behalf of recipients of the Research, in the Asia Pacific markets covered by the Research.

Recipients of the Research are advised that the Research is NOT a product of SG, SG Americas Securities, LLC ("SGAS") or any of SG's other affiliates. Under the terms of the agreement between SG and Haitong International, Haitong International has sole control over the content of the Research and is responsible for compliance with all applicable local laws, rules and regulations governing the Research. Neither SG, SGAS, nor any of SG's other affiliates exercise any control over the contents of, or views expressed in, the Research. Except as required by any applicable law, rule or regulation, neither SG nor any of its affiliates has independently reviewed the Research and make no representation and express no view as to its completeness, accuracy, or contents. To the extent permissible under local law, rules and regulations, SG and its affiliates shall not be liable to Recipients or any third parties for any loss suffered as a result of reliance on the Research.

HAITONG INTERNATIONAL DISCLAIMERS AND DISCLOSURES

HTIRL Analyst Certification: I, Tony Tanaka, certify that (i) the views expressed in this research report accurately reflect my personal views about any or all of the subject companies or issuers referred to in this research and (ii) no part of my compensation was, is or will be directly or indirectly related to the specific recommendations or views expressed in this research report; and that I have no beneficial interest in the security or securities discussed.

Conflict of Interest Disclosures

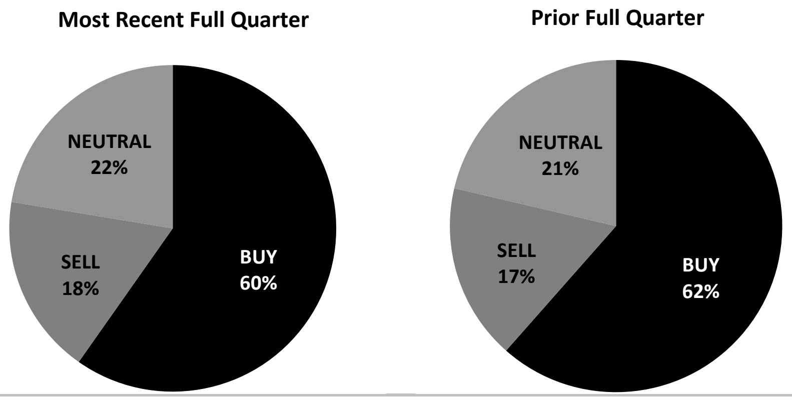
Haitong International and certain of its affiliates may engage in investment banking business and/or may make markets or hold proprietary positions in a limited number of securities or companies covered by the Research. To the extent that this is the case, included below are disclosures regarding those relationships (if no disclosures are included, it means that there are currently no such relationships).

Ratings Definitions: Haitong International Research Limited ("HTIRL") has three ratings, which are defined below. The percentage of BUY, SELL or NEUTRAL ratings out of the total number of rated notes appears in the Ratings Distribution chart. ALL BUY and SELL rated stocks have a target price which represents the analyst's best estimate of the fundamental value of the stock on a 12 month forward basis.

BUY> 15% absolute upside performance expected within the next 12 months

NEUTRAL: A stock under coverage with insufficient upside or downside to justify a BUY or SELL rating. For purposes only of FINRA/NYSE ratings distribution rules, our Neutral rating falls into a hold rating category.

Rating Distribution



Change in Ratings Definitions: Until end-May 2015, Haitong International Research Limited ("HTIRL") had the following investment rating system based on the analyst's best estimate of the fundamental value of the stock on a 9-12 month forward basis:

- Buy: Target price +15% or more above the current price
- Hold: Target price within 0% to +15% of the current price
- Sell: Target price below the current price

The Rating Distribution pie chart for the most recent full quarter is based on the new HTIRL rating system and the prior full quarter on the legacy HTIRL rating system.

Haitong International Equity Research Ratings Distribution, as of June 30, 2015

	BUY	**Neutral** (hold)	**SELL**
HTIRL Equity Research Coverage	60%	22%	18%
IB clients*	1%	0%	0%

*Percentage of investment banking clients in each rating category.

For purposes only of FINRA/NYSE ratings distribution rules, our Neutral rating falls into a hold rating category. Please note that stocks with an NR designation are not included in the table above.

Haitong International Non-Rated Research: Haitong International Research Limited ("HTIRL") publishes quantitative, screening or short reports which may rank stocks according to valuation and other metrics or may suggest prices based on possible valuation multiples. Such rankings or suggested prices do not purport to be stock ratings or target prices or fundamental values and are for information only.

HTIRL IMPORTANT DISCLAIMER: The Research is issued by Haitong International Research Limited ("HTIRL"), a licensed corporation to carry on Type 4 regulated activity (advising on securities) for the purpose of the Securities and Futures Ordinance (Cap. 571), and is approved for distribution by Haitong International Securities Company Limited ("HTISCL") and/or Haitong International Investment Services Limited ("HTIIS"), both licensed corporations to carry on Type 1 regulated activity (dealing in securities) in Hong Kong, in addition to SG pursuant to contractual agreement.

The information and opinions contained in this document have been compiled or arrived at from sources believed to be reliable and in good faith but no representation or warranty, express or implied, is made by HTIRL, HTISCL, HTIIS or any other members within the Haitong International Securities Group of Companies ("HTISG") from which this document may be received, as to their accuracy, completeness or correctness. All opinions expressed herein are as of the date of this report and are subject to change without notice. This document is for information purpose only. Descriptions of any companies or their securities mentioned herein are not intended to be complete and this document is not, and should not be construed expressly or impliedly as, an offer to buy or sell securities. The securities referred to in this document may not be eligible for buy or sale in some jurisdictions. If an investment product is denominated in a currency other than an investor's home currency, a change in exchange rates may adversely affect the investment. Past performance is not necessarily indicative of future results. Certain transactions, including those involving derivatives, give rise to substantial risk and are not suitable for all investors. You should also bear in mind that recommendations in this document are not tailor-made for you. The analyst has not taken into account your unique financial circumstances, such as your financial situation and risk appetite. You must, therefore, analyze and should, where applicable, consult your own legal, tax, accounting, financial and other professional advisers to evaluate whether the recommendations suits you before investment. Neither HTISG nor any of its directors, employees or agent accepts any liability whatsoever for any direct or consequential loss arising from any use of the materials contained in this document.

HTISG and our affiliates, officers, directors, and employees, excluding the analysts responsible for the content of this document, will from time to time have long or short positions in, act as principal in, and buy or sell, the securities or derivatives, if any, referred to in this document. Sales, traders, and other professionals of HTISG may provide oral or written market commentary or trading strategies to the relevant clients and the companies within HTISG that reflect opinions that are contrary to the opinions expressed in this document. HTISG may make investment decisions that are inconsistent with the recommendations or views expressed in this document. HTIRL is under no obligation to ensure that such other trading ideas or recommendations are brought to the attention of any recipient of this document.

Please refer to HTIRL's website www.equities.htisec.com for further information on HTIRL's organisational and administrative arrangements set up for the prevention and avoidance of conflicts of interest with respect to Research.

Non U.S. Analyst Disclosure: The HTIRL analyst(s) listed on the cover of this Research is (are) not registered or qualified as a research analyst with FINRA and are not subject to U.S. FINRA Rule 2711 restrictions on communications with companies that are the subject of the Research; public appearances; and trading securities by a research analyst.

SG DISCLAIMERS AND DISCLOSURES

Société Générale is a French credit institution (bank) which is regulated by the AMF and authorized and supervised by the Autorité de Contrôle Prudentiel. The information herein is not intended to be an offer to buy or sell, or a solicitation of an offer to buy or sell, any securities, and including any expression of an opinion, has been obtained from or is based upon sources believed to be reliable, but is not guaranteed as to accuracy or completeness. SG and the affiliated companies in the SG Group may from time to time deal in, profit from the trading of, hold or act as market-makers or advisers, brokers or bankers in relation to the securities therein, of persons, firms or entities mentioned in this document or be represented on the board of such firms or entities. SG and the affiliated companies in the SG Group do, from time to time, act as a principal trader in securities that may be referred to in this report and hold securities positions. Employees of SG and the affiliated companies in the SG Group, or individuals connected to them, may from time to time have a position in or hold any of the investment mentioned in this document. SG and its affiliated companies have disclosed interests in the companies and/or securities referred to in this Research to the extent required by all applicable laws.

SG Third Party Research Disclosures

IMPORTANT DISCLOSURES

Bank of Tokyo Mitsubishi   SG acted as co-manager in Bank of Tokyo Mitsubishi's bond issue.

SG or its affiliates had an investment banking client relationship during the past 12 months with Bank of Tokyo Mitsubishi.
SG or its affiliates have received compensation for investment banking services in the past 12 months from Bank of Tokyo Mitusbishi.
SG or its affiliates managed or co-managed in the past 12 months a public offering of securities of Bank of Tokyo Mitsubishi.

DISTRIBUTION AND REGIONAL NOTICES:

Under the agreement, SG and its affiliates is the non-exclusive distributor of the Research to SG's institutional clients globally (the "Recipients"). Except as otherwise indicated below, any Recipient wishing to discuss this report or effect any transaction in any security discussed in the Research should contact their SG or Haitong International salesperson in their own country or region.

Asian Pacific Region

Notice to Hong Kong investors: This research has been produced, and issued, by Haitong International Research Limited ("HTIRL") a Hong Kong affiliate of Haitong International, which is licensed by the Securities and Futures Commission of Hong Kong under the Securities and Futures Ordinance (Chapter 571 of the Laws of Hong Kong) ("SFO"), and which takes full responsibility for the contents of the Research. The Research is being distributed by SG Securities (HK) Limited which is licensed by the Securities and Futures Commission of Hong Kong under the SFO. This document does not constitute a solicitation or an offer of securities or an invitation to the public within the meaning of the SFO. This Research is only to be circulated to "professional investors" as defined in the SFO. This research has not been reviewed by Securities and Futures Commission. You should not make investment decisions solely on the basis of the information contained in this research.

Notice to Japanese investors: This research is issued by Haitong International Research Limited ("HTIRL") a Hong Kong affiliate of Haitong International, which is licensed by the Securities and Futures Commission of Hong Kong under the Securities and Futures Ordinance (Chapter 571 of the Laws of Hong Kong) ("SFO"), with the assistance of Haitong International Japaninvest KK, a Japanese affiliate of Haitong International, which is regulated as an Investment Adviser by the Kanto Finance Bureau of Japan, and which takes full responsibility for the contents of the research. This research is distributed in Japan by Société Générale Securities (North Pacific) Ltd., Tokyo Branch, which is regulated by the Financial Services Agency of Japan. This research is solely and exclusively directed at, and made available only to "Qualified Institutional Investors" as defined in the Financial Instruments and Exchange Law of Japan.

Notice to Singapore investors: This research has been produced by Haitong International Research Limited ("HTIRL") a Hong Kong affiliate of Haitong International, which is licensed by the Securities and Futures Commission of Hong Kong under the Securities and Futures Ordinance (Chapter 571 of the Laws of Hong Kong) ("SFO"). This document is provided in Singapore by or through Société Générale, Singapore Branch and is only provided to accredited investors, expert investors and institutional investors, as defined in Section 4A of the Securities and Futures Act, Cap. 289. Recipients of this document are to contact Société Générale, Singapore Branch in respect of any matters arising from, or in connection with, the document. If you are an accredited investor or expert investor, please be informed that in our dealings with you, we are relying on certain exemptions to the Financial Advisers Act. Cap. 110 ("FAA") - (1) the exemption in Regulation 33 of the Financial Advisers Regulations ("FAR"), which exempts us from complying with Section 25 of the FAA on disclosure of product information to clients; (2) the exemption set out in Regulation 34 of the FAR, which exempts us from complying with Section 27 of the FAA on recommendations; and (3) the exemption set out in Regulation 35 of the FAR, which exempts us from complying with Section 36 of the FAA on disclosure of certain interests in securities.

Notice to Australian investors: This research is distributed in Australia by Société Générale. Societe Generale is exempt from the requirement to hold an Australian financial services license (AFSL) under the Corporations Act 2001 (CT) in respect of financial services, in reliance on ASIC Class Order 03/8240, a copy of which may be obtained at the web site of the Australian Securities and Investments Commission, http://www.asic.gov.au. The class order exempts financial services providers with a limited connection to Australia from the requirement to hold an AFSL where they provide financial services only to wholesale clients in Australia on certain conditions. Financial services provided by Societe Generale may be regulated under foreign laws and regulatory requirements, which are different from the laws applying in Australia.

Notice to Korean Investors: This report is distributed in Korea by SG Securities Korea Co., Ltd which is regulated by the Financial Supervisory Service and the Financial Services Commission.

Other Regions

Notice to French investors: This publication is distributed in France by or through Société Générale ("SG") which is regulated by the AMF and authorized and supervised by the Autorité de Contrôle Prudentiel.

Notice to UK investors: This publication is issued by Haitong International Research Limited ("HTIRL") a Hong Kong affiliate of Haitong International, which is licensed by the Securities and Futures Commission of Hong Kong under the Securities and Futures Ordinance (Chapter 571 of the Laws of Hong Kong) ("SFO"), and distributed by or through Société Générale, London Branch. Société Générale is a French credit institution (bank) authorised by the Autorité de Contrôle Prudentiel (the French Prudential Control Authority) and the Prudential Regulation Authority and subject to limited regulation by the Financial Conduct Authority and Prudential Regulation Authority. Details about the extent of our authorisation and regulation by the Prudential Regulation Authority, and regulation by the Financial Conduct Authority are available from us on request.

Notice to US investors: This research is distributed in the US by SG Americas Securities LLC ("SGAS") as third party research and its distribution is restricted to institutional clients only under SEC Rule 15a-6. Any U.S. SG client wishing to discuss this report or effect transactions in any security discussed herein should do so with or through their respective salesperson at SGAS. SGAS is a member of FINRA, NYSE, NFA and SIPC and its address is 245 Park Avenue, New York, NY, 10167. (212)-278-6000.

This research is intended for the Recipients only and may not be reproduced or redistributed without the written consent of Haitong International or SG.

http://www.sgresearch.com/compliance.rha