

# NEEDS REPORT

January 2011

Welcome to the Nikkei NEEDS quarterly newsletter for January 2011. We hope that you had a good Christmas holiday and wish you all a very Happy New Year. In this edition we look at creating Industrial Sector reports, convertible bonds in Japan, Japanese Corporate Actions and the new volatility and China Related indices launched last quarter.

We always welcome your comments and suggestions for future issues. If you have any comments please feel free to email them to [e-needs@eur.nikkei.com](mailto:e-needs@eur.nikkei.com).

[Nikkei 225 buoyed by Strong Growth Figures](#)

[Nikkei Volatility Index and Nikkei China Related Index Launched](#)

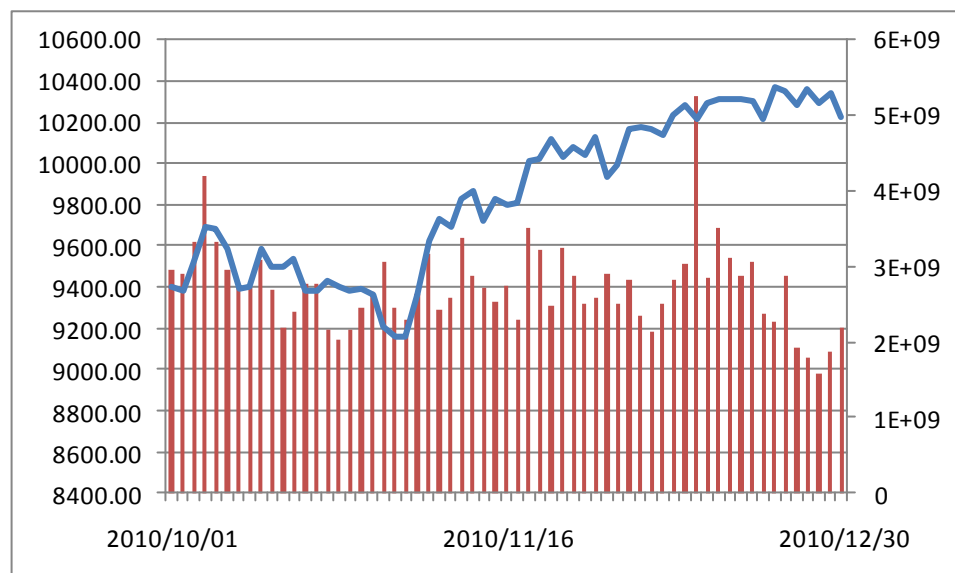
[NEEDS Report: The Monte Carlo Simulation for Convertible Bond Pricing](#)

[Corporate Actions Data: Data on the Number of Outstanding Shares](#)

[Industrial Sector Benchmarking using Financial QUEST](#)

## Nikkei 225 buoyed by Strong Growth Figures

Nikkei 225 Close: 10,228.92 (+9.17%)



**3 Month High: 10,370.53**  
**3 Month Low: 9154.72**

Largest 1 Day gain: 267.21  
(5/11/2010)

Largest 1 Day loss: -200.25  
(12/10/2010)

The Nikkei 225 benchmark index has risen over the course of the last quarter to finish up 9.17%. Positive economic and business sentiment data from both Japan and the US and a fall in the value of the yen have boosted the Nikkei to its highest level in 7 months. In the period January 2010 - December 2010,

the Nikkei is down 3%. The following days are market holidays in Japan in 2011.

### Market Holidays in 2011:

Jan 1 - 3	Oshogatsu (New Year Holiday)	Sep 19	Respect for the Aged Day
Jan 10	Coming of Age Day	Sep 23	Autumn Equinox
Feb 11	National Foundation Day	Oct 10	Sports Day
Mar 21	Vernal Equinox	Nov 3	Culture Day
Apr 29	Showa Day	Nov 23	Labor Day
May 3 - 5	Golden Week	Dec 23	Emperor's Birthday
Jul 18	Marine Day		

## Nikkei Launches Nikkei Stock Average Volatility Index and Nikkei China-Related Index

Nikkei has announced the launch of two new indices: The Nikkei Stock Average Volatility Index, an index to reflect the volatility of the Nikkei 225 index based on the implied volatility of Nikkei 225 options traded on the Osaka Securities Exchange; and the Nikkei China Related 50 Index, an index for the top 50 major Japanese companies with operations in China.

The Nikkei Stock Average Volatility Index was launched on 19th November 2010 to indicate the expected degree of fluctuations for the Nikkei 225 in the future. As discussed in October's NEEDS Report newsletter, the volatility calculated from the price of stock index options provides an accurate measure of expected volatility in the Nikkei 225 index. The index uses the implied volatility to provide an index of investor sentiment in the market – the higher the volatility index, the greater the uncertainty in the markets.

Due to the recent turbulent economic situation, there has been an increase in demand for an original index that shows stock market fluctuation through investor sentiment. Nikkei has developed this index to accommodate these requests. For information on the calculation method and for the index value, please contact a Nikkei representative or [click here for the index guide](#).

The Nikkei China Related 50 Index is an index containing the top 50 Japanese companies ranked by their operations in China. The index was launched on December 13th and the constituents have been selected from major Japanese companies with large market capitalizations from the standpoint of how actively they are involved in China using newspaper articles published by Nikkei (such as how frequently China related articles are carried) and their annual financial reports.

The index has been created to reflect the rapid economic growth of China and to analyse and evaluate the performance of Japanese companies that use China as a major production base or market place. Further details of the index, including the calculation method and selection criteria can be found [here](#).

If you would like further information, please contact a [Nikkei Representative](#).

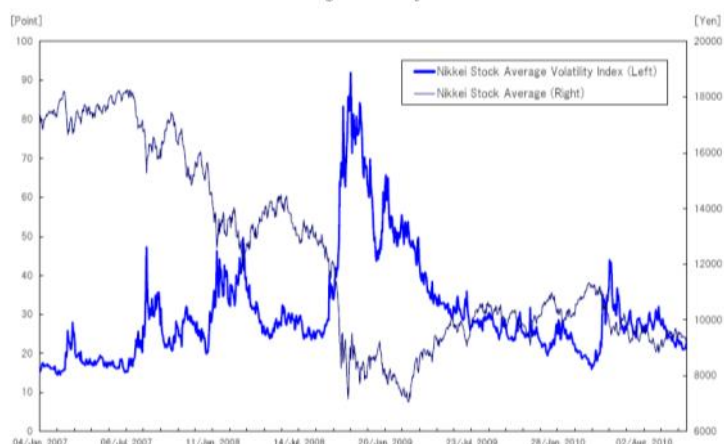
### Nikkei Europe Moving London Offices in January

Nikkei Europe will be moving address from 21st January 2011 to new offices in Holborn, London. The Nikkei Europe business sections and the Nikkei editorial departments will be vacating from our current offices in Finsbury Circus to Fetter Lane, close to Chancery Lane tube station. Our new address will be:

6th Floor  
Barnard's Inn  
86 Fetter Lane  
London  
EC4A 1EN

Further contact details will be sent to clients later this month.

Nikkei Stock Average Volatility index since 2007



### Online Information 2011 Exhibition

In the last week of November, Nikkei Europe exhibited for the first time at the Online Information Conference at the Olympia hotel in London. During the 3 day event, Nikkei Europe provided demonstrations and free trials of Financial QUEST and NEEDS Tick-Vision, as well as our Japanese language news service, Telecom 21. The event is the largest gathering of information providers in the UK with around 9,000 industry specialists attending.

The next event will be held in November 2011 and Nikkei Europe is scheduled to exhibit at the conference. We will provide more details of promotions for the conference closer to the time.

# NEEDS Report: Convertible Bonds and the Monte Carlo Method

A brief look at pricing valuation of Convertible Bonds on the Japanese market.

The Convertible Bond (CB) market in Japan is one of the most regulated convertible bond markets in the world. You only have to look at company financial reports from Japan to realise that Japanese companies use CBs extensively to finance their operations.

FinancialQUEST and NEEDS BULK both offer detailed files for CBs traded on exchanges in Japan. This report will examine convertible bonds in Japan and use data available through NEEDS to identify a simple pricing model for Convertible Bonds using the Monte Carlo Simulation.

## Convertible Bonds

CBs act in a very similar way to warrants or call options - they are ordinary straight bonds but with an option to convert the bond to ordinary stock for a certain price after the conversion date but before the redemption date of the bond. In this way they function very similar to American call options, which allow the holder the right to exercise at any time over a set period.

Some issues of Convertible Bond are relatively straight forward and offer conversion of the bonds during the conversion period. However some bonds incorporate call or put features allowing the holder to force conversion when the stock price reaches a certain level. A call option is usually advantageous to the issuer and a put option is usually advantageous to the holder.

## Convertible Bond Example

The example we will look at here is from NEC Corp (6701) a large cap IT company based in Tokyo. They use both ordinary straight bonds and Convertible Bonds in their corporate financing.

We can download CB pricing and attribute data in Financial QUEST from the listed bond database as shown in Table (1). The conversion ratio for this bond issue is one to one, one bond for one common share issue before the due date.

This issue works in the same way as an option, giving the holder the right to convert the bond to one share of NEC at the conversion price of 1250 yen. When the price of the stock exceeds the stock value plus the expected future return from the bond, it makes financial sense to convert at the lower price and then sell at the higher price on the open market to make the profit. However in converting the bond, the bond holder renounces any future coupon and redemption payments.

Issuer / Bond Type Code	6701
Nikkei Company ID	0001190
New Security Code - ISIN	JP373300PS49
Issue Name in Kanji	日本電気 10回CB
Issue Name in Kanji (Abbreviated)	NEC
Issue Name in English	NEC CORP. CB 10
Issue Name in English (Abbreviated)	NEC
Issue Name in Katakana	ニッポンデンキ 10回イ
Issue Name in Katakana (Abbreviated)	NEC
Issue Date	1996/04/15
Issue Price (yen)	100
Tot. Amount Issued (yen)	100000000000
Redemption/Maturity Date	2011/09/30
Redemption Price (yen)	100
Coupon Bearing Type	1
Coupon Rate (%)	1
Coupon Payable Month (1)	3
Coupon Payable Month (2)	9
Coupon Payable Date	End of Month
Bond Rating by R&I	A
Conversion Price (yen)	1250
Conversion Start Date	1996/06/03
Amount Converted to date (yen)	2331000000

Table (1) NEC Corp Convertible Bond 10 Series data  
Source Nikkei NEEDS

CBs are one of the hardest financial instruments to price because the price is dependent on many independent factors such as credit risk (although convertible bonds have a lower credit risk than straight bonds), interest rate risk, stock price volatility etc. This creates quite a considerable challenge and there is no standard calculation method for CBs. Recent academic research has focused on the Monte Carlo simulation for pricing these complex instruments.

## The Monte Carlo Simulation

The Monte Carlo Simulation, named after the capital of Monaco and famous for its casinos, is used in a range of different industries to simulate the outcome of certain events based on probability, randomness and volume. In finance, it is often the only way to produce prices for complex financial instruments that do not have closed form equations to model their value such as Convertible Bonds, American options, Exotic options (such as Asian options) and swaps.

The Monte Carlo Simulation works by taking the average of tens of thousands of simulations in such a way that the value converges with its perceived "true" value. Because of the number of calculations involved, the simulation must be done on a computer.

For instance, in the majority of Monte Carlo simulations involving financial products, the simulation is

used to simulate the price of an underlying asset, most often a stock price. This can be calculated relatively easily in Excel or via other programming techniques by simulating Geometric Brownian Motion, or the “random walk” often used to describe stock price movements.

The basic formula for the “random walk” is:

$$\Delta S = S_0(\mu T + \sigma \tau \sqrt{T})$$

where  $\Delta S$  is the change in price of stock  $S$ ;  $S_0$  is the initial price of stock  $S$ ;  $\mu$  is the drift in the stock, often the risk free rate of return;  $T$  is the time period of the investment,  $\sigma$  is the volatility of stock  $S$ .  $\tau$  is a normally distributed random variable.

By generating a predicted stock price for a given term, it is then possible to add conditions to each stock price in line with the financial instrument.

For instance, in calculating stock options, a stock option is worth the positive difference between the strike price and the current share price. If this value is less than 0, the option is worthless. A convertible bond is very similar except the minimum value is not zero, but is the value of the bond.

For instance, if the current stock price was above the 1250 conversion value, ie trading at 1900, the value of the conversion part of the bond would be:

1900 - 1250 = 650 (less the cost of future coupon payments)

**Valuation**

When valuing the bond in a Monte Carlo Simulation, the computer program will calculate various trajectories of the stock price based on its volatility in random walks. Once the walk has been plotted the bond conditions can be checked, such as whether the exercise option will be profitable or if conditions will result in forced conversion of the bond. This gives a value for the bond for this simulation.

The process is repeated tens of thousands of times and the end value is average to give a future value of the bond.

The sample program shown to the right provides a simple demonstration of a model for the calculation of the option part of the CB. It produces a complete stock price series for each simulation, however only uses the last date in the series to calculate the value of the option as there is no put/ call feature on the NEC CB.

As the current share price for NEC Corp is well below the conversion price of 1250 at 244 yen and

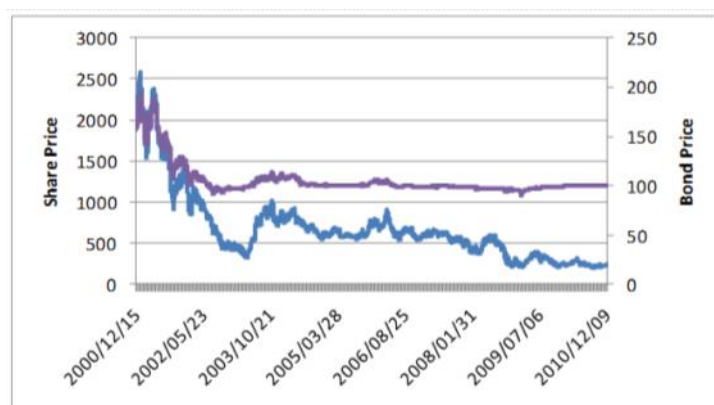
```

Random ran = new Random();
private double RandomNumber()
{
    // Produces a random number with normal distribution
    // between -1 and 1.
    double randomNumber = 0.0;
    for (int i = 1; i < 13; i++)
        randomNumber += ran.NextDouble();
    return randomNumber - 6.0;
}

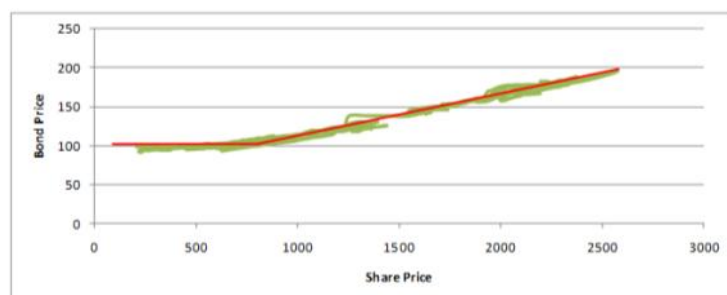
private double[] ReturnStock(double initialPrice, double volatility,
int time, double riskFreeRate)
{
    // Calculate the random walk for a stock with
    // Geometric Brownian Motion.
    double[] stockSeries = new Double[time + 1];
    for (int i = 0; i < time; i++)
    {
        if (i == 0)
            stockSeries[i] = initialPrice;
        else
            stockSeries[i] = stockSeries[i - 1] + (stockSeries[i - 1] *
                ((riskFreeRate * (time - i / 365)) + (volatility *
                    RandomNumber() * Math.Pow((time - i)/365, 0.5)));
    }
    return stockSeries;
}

public double simulatedPrice(double initialPrice, double volatility,
int time, double riskFreeRate, double bondPrice, double conversion)
{
    // The Monte Carlo Simulation. Takes
    // 100,000 simulations and checks each one
    double average = 0;
    for (int x = 0; x < 100000; x++)
    {
        double[] series = ReturnStock(initialPrice, volatility,
            time, riskFreeRate);
        double returnAmount = series[series.Length - 1] - conversion;
        average += Math.Max(bondPrice, (returnAmount + bondPrice));
    }
    return average /= 100000;
}
    
```

Sample C#.NET script for Convertible Bond Pricing - For illustration purposes only.



Graph (1): Historical Pricing for NEC Corp Stock Price (Blue) and Bond Price (Purple) 2000 - 2010. Source: Nikkei NEEDS



Graph (2): Historical Pricing for NEC Corp Stock Price (Blue) and Bond Price (Purple) 2000 - 2010. Source: Nikkei NEEDS

the volatility of the stock is 22.9%, the value of the option part of the bond is 0 and the bond is the same as a normal straight bond.

From FinancialQUEST we can see the historical stock price and bond price for the period 2000 - 2010 in Graph (1). We can plot this graph with the Bond Price as the dependent variable and the Share price as the independent variable, Graph (2). This shows a distinct pattern similar to call option graphs, showing the value of the bond increasing steadily as the share price increases. However, this increase does not start at the conversion price of the option, 1250 yen, but appears to start much lower at around 800 yen. The price levels off at the straight bond price of 100 yen.

The pricing of CBs and other complex financial instruments is an enduring challenge in the financial industry, however advances in computing technology have enabled processor intensive models such as Monte Carlo to be executed much faster than before and have progressed through new academic studies into their effectiveness. ■

### Nikkei NEEDS Data

NEEDS contains both listed and unlisted bond data for Japan covering all listed Convertible Bonds, Japanese Government Bonds and unlisted Corporate Bonds. These are available via our online data download service FinancialQUEST and via NEEDS BULK data feeds. For more information, please contact a Nikkei Representative.

Ben Clarke - E-Media Executive, Nikkei Europe

## Nikkei NEEDS Corporate Actions Data

How to Calculate the latest Number of Outstanding Shares using NEEDS Data.

Timely data updates for the number of outstanding shares is an essential part of equity research. NEEDS provides quarterly based financial statements data as well as annual data, but there will inevitably be gaps in between the mandatory disclosure periods. To fill the gaps, NEEDS also provides corporate action data which covers timely capital increase/decrease information such as new stock issues, stock splits, reverse splits of stock, write-off of treasury stocks, etc. Using the corporate action data makes it possible to trace changes in the number of outstanding shares in a timely manner. The Corporate Action data file contains over 40 years of actions data as listed below.

The corporate action data is available through NEEDS-BULK/FDS (FTP file transfer service) or NEEDS-FinancialQUEST (Data download platform service).

As the data span is over 40 years, some of the corporate action categories have been changed or merged with others due to changes of the corporate law. The pale-orange-background categories are no longer updated and have been incorporated into other data items or are no longer disclosed. "MARK" in the table shows which category is necessary to trace the number of outstanding shares. Ex-rights events can be discriminated by the "ex-rights" column mark.

The timing of disclosure of this data is normally much earlier than

	Data	Data available from		MARK	ex-rights
		Listed	JASDAQ		
Stock information	Paid-in capital increase	1970	1985	*	*
	Capital increase by issuing stock at a median price between face value and market price	1970 to 2001	1985 to 2001	*	*
	Capital increase with stock issued gratis	1970 to Apr.1991	1985 to Apr.1991	*	*
	Capital increase with stock issue at market price	1970	1985	*	*
	Capital increase with allotment of shares to third	1970	1985	*	
	Preferred stock issues	1970	1985		*
	Convertible bond conversions	1970	1985	*	
	Mergers	1970	1985	*	
	Stock splits	1970	1985	*	*
	Par value changes	1970 to 2001	1985 to 2001	*	*
	Stock dividends	1970 to Apr.1991	1985 to Apr.1991	*	*
	Stock consolidations	1970	1985		*
	Capital reduction	1970	1985	*	*
	Acquisitions	1984	1985		
	Reorganization (Separated or Transferred)	05/2001	05/2001		
	Reorganization (Succeeding Company)	05/2001	05/2001	*	
Bond information	Straight bonds	1970	1985		
	CB Type bond with advanced booking warrant (Convertible bonds)	1970	1985		
	Advanced booking warrant (Warrant bonds)	1970	1985		
Change information	Preferred stock changes	1984	1985		
	Deferred stock changes	1984	1985		
	Straight bond changes	1984	1985		
	CB Type bond change with advanced booking warrant (Convertible bond changes)	1984	1985		
Related stock information	Advanced booking warrant change (Warrant bond)	1984	1985		
	Stock option allotments to separate company	1984	1985		
	Stock offerings	1984	1985		
	Take-over bids	1990	1990		
	Treasury stock acquisitions	1995	1995		
	Treasury Stocks Buy-Backs	10/2001	10/2001		
	Issuance of share purchase warrant	10/2003	10/2003		
Ex-rights information	Irregular shareholder's meeting	10/2003	10/2003		
	Outstanding stock with ex-rights	1970	1985		

its data effective date, the date that the changes to the number of outstanding shares takes effect and new stock is issued giving you time to make adjustments before they come into effect. Time order of event date to issue the new stock is usually as follows:

1. Date of resolution of board of directors' meeting
2. Ex-rights date
3. Date of general (shareholders') meeting
4. Data effective date (Date of issuing the new stock)

Corporate Action Data of Hitachi (T6501)

Disclosure date	Disclosure date is for	Type of Corporate Action	comment	Data effective date	Effective date is for	Number of outstanding shares	Number of new issues	sum up *
						unit=1 stock	unit=1 stock	unit=1 stock
17/02/2009	Date of Directors Meeting	Separation	Separating Hitachi Industrial Equipment	01/04/2009	Separation			
27/04/2009	Date of Directors Meeting	Merger	Merging Hitachi Communication Technologies	01/07/2009	Merger	3,368,126,056		
26/05/2009	Date of Directors Meeting	Separation	Separating Hitachi Consumer Electronics	01/07/2009	Separation			
26/05/2009	Date of Directors Meeting	Separation	Separating Hitachi Automotive Systems	01/07/2009	Separation			
16/11/2009	Date of Directors Meeting	Issue at market price		15/12/2009	Issuing new shares	4,458,126,056	690,000,000	
16/11/2009	Date of Directors Meeting	Issue at market price		15/12/2009	Issuing new shares	4,458,126,056	400,000,000	
16/11/2009	Date of Directors Meeting	Private placement		26/12/2009	Issuing new shares	4,518,126,056	60,000,000	4,518,126,056
16/11/2009	Date of Directors Meeting	Sale of stock		08/12/2009	Sales of stock			
24/02/2010	Date of Directors Meeting	Merger	Merging Hitachi Plant Technologies	01/04/2010	Merger	4,518,132,365		
24/02/2010	Date of Directors Meeting	Merger	Merging Hitachi Maxel	01/04/2010	Merger	4,518,132,365		
23/03/2010		Conversion of CB, etc.		28/02/2010	Issuing new shares	4,518,132,365	6,309	4,518,132,365
21/05/2010		Conversion of CB, etc.		30/04/2010	Issuing new shares	4,518,151,290	18,925	4,518,151,290
21/09/2010		Conversion of CB, etc.		31/08/2010	Issuing new shares	4,518,154,444	3,154	4,518,154,444

Above is a data Sample from Hitachi (T6501) T+4 digits is the Tokyo Stock Exchange code.

In this sample multiple corporate actions take place on the same day - 16/11/2009. There were two "issue at market price", one "private placement" and one "sales of stock". As the "sales of stock" is not issuing new stocks but is the reselling of shareholders' shares, it won't affect the total number of outstanding shares.

The data item "the number of outstanding shares" shown in the table is the same value for the two "issue at market price" and "private placement" because the data is total result for the number of outstanding shares for all these events.

But the item "the number of new issues" provides the increase/ decrease due to each separate event. The latest number of outstanding shares can be calculated by adding the number of increase/decrease to the previous number of outstanding shares.

These three events are disclosed on 16/11/2009 -

one month earlier than its new stock issue date which is 15/12/2009 or 26/12/2009. NEEDS updates the data on the disclosure date.

The table over the page shows the update timing for each corporate action event. The disclosure date for most events is date of resolution of the board of directors' meeting with exception of conversion of CBs, which is two days after the disclosure of 20th each month.

This follows on from the CB discussion in the previous chapter.

### The number of outstanding shares with stock prices

To calculate PER, the stock price and the latest number of outstanding shares is necessary. NEEDS provides the stock prices with some financial key data so that our users can handle the data more easily. The number of outstanding shares data item in the Stock Data File contains delayed data that is updated on the ex-rights date rather than the earlier disclo-

	Record type	Data	Data Source	Data update timing	Data effective date
Stock information	G110	Paid-in capital increase	Timely disclosure report, other reports*	Date of resolution of board of directors meeting	Date of new stock issue (date of changes in number of sa (same above)
	G120	Capital increase by issuing stock at a median price between face value and market price	—		
	G130	Capital increase with stock issued gratis	—		sa
	G140	Capital increase with stock issue at market price	Timely disclosure report, other reports*	Date of resolution of board of directors meeting	sa
	G150	Capital increase with allotment of shares to third party	sa	sa	sa
	G160	Preferred stock issues	sa	sa	sa
	G170	Convertible bond conversions	other reports	A day or two days after disclosure (20th each month, previous month data is available)	Date of new stock issue (end of the month)
	G200	Mergers	Timely disclosure report, other reports*	Date of resolution of board of directors meeting	Date of the merger
	G210	Stock splits	sa	sa	Effective date
	G220	Par value changes	—	—	Date of per value changes
	G230	Stock dividends	—	—	Date of new stock issue
	G240	Stock consolidations	—	—	Effective date
	G250	Capital reduction	Timely disclosure report, other reports*	Date of resolution of board of directors meeting	sa
	G290	Acquisitions	sa	sa	Date of the merger
	Bond information	G820	Reorganization (Separated or Transferred Company)	sa	sa
G830		Reorganization (Succeeding Company)	sa	sa	Due date of the reorganizing
G310		Straight bonds	Timely disclosure report	sa	Date of new bond issue
Change information	G320	CB Type bond with advanced booking warrant (Convertible bonds)	sa	sa	sa
	G330	Advanced booking warrant (Warrant bonds)	sa	sa	sa
	G510	Preferred stock changes	Timely disclosure report, other reports*	sa	Month of the changes (yyyymm00, no day specified)
	G520	Deferred stock changes	—	—	sa
	G610	Straight bond changes	Timely disclosure report, YUHO	Date of resolution of board of directors meeting, When updating from the YUHO, next month of YUHO reporting	sa
Related stock information	G620	CB Type bond change with advanced booking warrant (Convertible bond)	sa	sa	sa
	G630	Advanced booking warrant change (Warrant bond changes)	sa	sa	sa
	G260	Stock option allotments to separate company	—	—	Date of allotment
	G270	Stock offerings	Timely disclosure report	Date of resolution of board of directors meeting	date of offering start
	G280	Take-over bids	sa	sa	Date of take-over bid start
	G810	Treasury stock acquisitions	sa	sa	Date of resolution of board of directors meeting
	G840	Treasury Stocks Buy-Backs	Share buyback report	A day after disclosure through the EDINET	The last day of the reporting period
Ex-rights information	G850	Issuance of share purchase warrant	Timely disclosure report	Date of resolution of board of directors meeting	Date of issue
	G860	Irregular shareholder's meeting	Timely disclosure report, other reports*	sa	Date of extraordinary general meeting
G420	Outstanding stock with ex-rights	regenerate from data input above	same timing as above	Date of ex-rights or date effective date	

sure date.

Users who want to use the timely value of the number of outstanding shares are recommended to subscribe the corporate action data as it is updated on the same day as the disclosure date, providing advanced warning of the change in outstanding shares before the ex rights date. It is advantageous to use the corporate actions data file along with the stock price file to get timely updates on the number of outstanding shares.

Subscription to the Corporate Actions data feed is via the NEEDS BULK service, and subscriptions can be made to individual record types as well as all Corporate Actions data. Our data files contain information for all listed Japanese companies.

For more details or to request output sample data, please contact [e-needs@eur.nikkei.com](mailto:e-needs@eur.nikkei.com).

## Industrial Sector Benchmark Calculation with Financial QUEST

The key to making the correct investment decision often lies in the value of a company in comparison to its peers in the same industrial sector. It can sometimes be problematic to calculate this data, especially in drawing data from all companies in the sector into consistent formats to conduct evaluation and make the right investment decision.

Financial QUEST - Nikkei's online corporate financial data download service can create accurate, ready to compare industrial sector benchmark templates in just five minutes - saving you time and allowing you to concentrate on making the right decision for your clients.

And the best thing is that once this template is created, you can simply load it back into Financial QUEST each quarter to update the averages automatically.

### Vertical Financial Statements

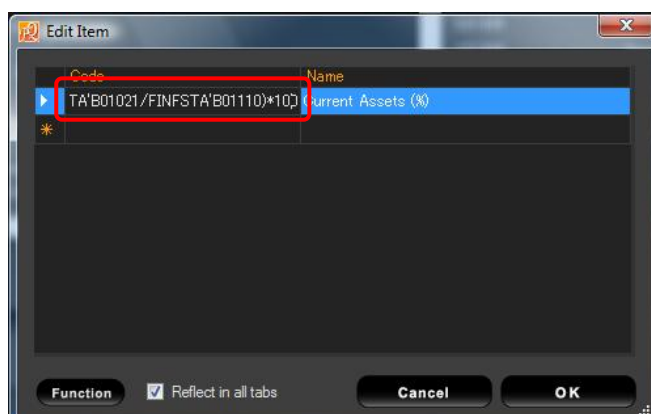
In order to first compare company financial statements, it is necessary to create a percentage value of the size of a company's assets and liabilities in order to remove biases on company size and market capitalization.

Financial QUEST will calculate these for you so that you do not need to download each company's report to get the industrial sector data.

### IT Sector Analysis Example

In the following example, we will look at producing the industrial sector statistics for the Information and Communications sector on the TSE in a step by step guide in Financial QUEST.

1. Start Financial QUEST and select the 'Corporate Financial Data' database. Click Next Step and proceed to the Target Selection Screen. In this example, select Quarterly reports.
2. Select the industry in the 'Industrial Class' >> 'TSE Industrial Class' and then double click the 'Information \_Communication' set. This should move to the Adopted List in the bottom half of the screen.
3. Select 'Corporate Financial Data' >> 'Industrial Companies' >> 'Balance Sheet - Assets' and select Current Assets, Cash and Total Assets from the item list. Then add Current Liabilities and Total Liabilities, Net Sales/ Operating Revenue, Cost of Sales, Gross Profit and Operating Income.



#### Balance Sheet Calculations:

To create a benchmark for all companies in the sector, divide every item in the balance sheet by the company's Total Assets:

Eg

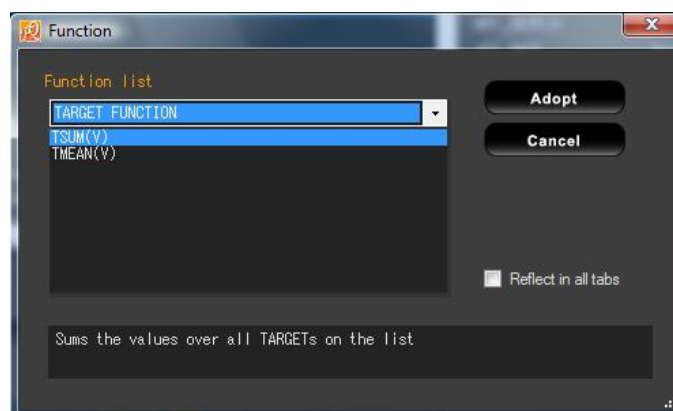
$$\text{Current Assets (\%)} = \frac{\text{Current Assets}}{\text{Total Assets}} * 100$$

#### Income Statement Calculations:

Likewise for the income statement, divide every item by the Operating Revenue:

Eg

$$\text{Cost of Sales(\%)} = \frac{\text{Cost of Sales}}{\text{Revenue}} * 100$$



4. At the bottom of the Adoption List are three buttons: 'Edit', 'Function' and 'Delete'. Select all of the items in the Adoption List and click 'Edit' and the Edit Item window will appear as shown above left. From here you can conduct mathematical operations on the data before you download, saving time with templates for future use. For the Balance Sheet items we will be dividing by the Total Assets to get the converted value for the company.

To perform this calculation double click the code window circled in red. Then add the following to the end of the item code: “/FINFSTA’B0110\*100”. This will divide the data item by the Total Assets. For the Income Statement Items, add “/FINFSTA’D01021\*100” to the end of the data item. So for example, the data item for Cash and Deposits should read: “FINFSTA’B01022/FINFSTA’B01110\*100”

5. After performing all of the calculations on the data items, select each one again and then click ‘Function’. The functions setting allows you to perform common mathematical functions automatically, like for instance moving averages and weightings. For this example we want target functions to create the mean for all targets in the target list. The new code for this item will be: “TMEAN(FINFSTA’B01022/FINFSTA’B01110\*100)” Complete this for all data items.

Note: It is also possible to enter this line into the Edit window manually.

6. We can now delete all of the items that do not have the “TMEAN” function in them. This will save us from downloading company data and will leave us with the industrial averages only. When performing the calculation, be aware that in the Data Handling section, NA values should be set as 1 for calculation purposes to avoid zero errors from occurring.

7. In the time period, select ‘Detailed Settings’ and enter P as the time period. This will give the latest results for Q3 2010. Then move to the download page. Move the ‘Date’ block to the horizontal axis on the top of the spreadsheet layout manager, and move everything else onto the vertical axis. Then click download.

8. This file can be saved as an Excel file and then in 3 months time, reloaded into Financial QUEST to refresh the data for to reflect the previous quarter’s results.

	2010	2009	2008
Current Assets (%)	63.71	63.58	64.35
Cash and Deposits (%)	30.30	29.16	28.92
Total Assets (%)	100	100	100
Current Liabilities (%)	29.03	29.68	30.02
Total Liabilities (%)	39.90	40.47	39.95
Shareholders' Equity (%)	58.87	58.51	57.91
Operating Revenue (%)	100	100	100
Cost of Sales / Operating Cost (%)	63.63	63.59	62.48
Gross Profit (%)	35.76	35.78	36.92
Operating Income (%)	4.04	3.96	5.37

Industrial Averages for the IT Sector on the TSE 2008 - 2010. Source: Nikkei NEEDS

### Data Usage

Industrial Sector data is useful for identifying companies that are outperforming or underperforming the industry standard. Taken with the Equity prices also available through Financial QUEST, it is possible to build templates that will provide you with companies that will provide historical equities data for companies that are outperforming the industry and are undervalued in relation to their peers, allowing you to generate original research and new investment ideas.

Producing the templates in Financial QUEST will take you minutes and can be updated at any point in the future in seconds. We also have support teams around the world who are able to help with the construction of templates and answer any questions you have while using the software.

### Trial IDs

We can provide 10 day trials of Financial QUEST with full technical support and training to investment professionals and academics employed by a research institute. If you would like a trial or demonstration of Financial QUEST, please contact a Nikkei Representative or complete the online form to request a trial on our website [here](#).

## NEEDS BULK

**NEEDS BULK** is Nikkei's premium data access service, providing daily updates and historical data from the Nikkei master data files. NEEDS BULK ensures that clients receive timely and accurate data directly to a central database. Popular NEEDS BULK file include Nikkei 225 data, Corporate Actions data, Tick by Tick data and Yuho/ Tanshin Corporate Financials data.



**NEEDS FinancialQUEST** is Nikkei's online data download service for Japanese economic data; providing over 30 years of historical data covering Japanese corporate reports, securities data, consumer statistics, government and GDP data. Monthly subscription options range from unlimited data access to pay per download to suit all budgetary requirements.



**Tick Vision** is the latest addition to the NEEDS suite providing online data download and analysis of Tick data from the Japanese stock markets, including over 10 years of individual equity, JGBs, equity options and stock index futures and options data. The software also includes data analysis and simulation tools to chart VWAP, beta, bid ask spreads etc throughout the day.

## NEEDS SPOT

**NEEDS SPOT** provides ad hoc access to data on the Nikkei database to academics and data managers who require a one off set of historical data for client research projects. The data is delivered in a variety of formats to suit the needs of our clients and can be delivered via email or DVD. A subscription is not required and we offer special promotional rates for academic users.

Nikkei Index Nikkei 225, 300, 500 indices data provided by Nikkei's official 3rd party vendor

This newsletter was created using NEEDS Data. For more information about NEEDS Data and access options, please visit our website [www.nikkeieu.com/needs](http://www.nikkeieu.com/needs) or contact a Nikkei Representative.

E-Media Department  
Nikkei Europe Ltd, Finsbury Circus House, 12-15 Finsbury Circus, London, EC2M 7EB, UK