DOOSAN CORPORATION
NOTES TO SEPARATE FINANCIAL STATEMENTS
AS OF AND FOR THE YEARS ENDED DECEMBER 31, 2012 AND 2011

1. GENERAL:

Doosan Corporation (the "Company") was incorporated on December 18, 1933, under the name of Sohwa-Kirin Beer, Ltd., to manufacture and sell beer. The Company has changed its name to Dongyang Beer, Ltd., in February 1948, to OB Beer, Ltd., in February 1996 and to Doosan Corporation on September 1, 1998. The Company is a business-type holding company and operates in the Republic of Korea.

Since June 1973, the Company's shares have been listed in the Korea Exchange (formerly Korea Stock Exchange). After several capital issues, the Company's share capital as of December 31, 2012, are ₩132,778 million, including ₩26,984 million of preferred share.

The Company's shares as of December 31, 2012, are owned as follows:

	Number of shares owned	Ownership percentage (%)
Related parties	9,362,805	44.89
Treasury stock	4,403,614	21.11
Others	7,092,402	34.00
Total	20,858,821	100.00

Meanwhile, 48.3% of preferred shares are owned by the largest shareholder and other and 51.7% of preferred shares are owned by others.

2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES:

The Company maintains its official accounting records in Korean won and prepares separate financial statements in conformity with Korean International Financial Reporting Standards ("K-IFRS"), in the Korean language (Hangul). Accordingly, these separate financial statements are intended for use by those who are informed about K-IFRS and Korean practices. The accompanying separate financial statements have been condensed, restructured and translated into English with certain expanded descriptions from the Korean language financial statements. Certain information included in the Korean language financial statements, but not required for a fair presentation of the Company's financial position, comprehensive income, changes in shareholders' equity or cash flows, is not presented in the accompanying separate financial statements.

(1) Basis of preparation

The Company has adopted K-IFRS for the annual period beginning on January 1, 2011.

The Company's separate financial statements are prepared in accordance with K-IFRS 1027 *Consolidated and Separated financial statements*, in which the controlling company, investors of associates or participants of joint control company have presented investments based on its direct equity investment, not on investee's reported performance and net assets.

The significant accounting policies under K-IFRSs followed by the Company in the preparation of its separate financial statements are summarized below, and these accounting policies, except for the effects of the changes of accounting policies that are described below, have been applied consistently to the separate financial statements for the current period and the accompanying comparative period.

The accompanying separate financial statements have been prepared on the historical cost basis except for certain non-current assets and financial instruments that are measured at revalued amounts or fair values. Historical cost is generally based on the fair value of the consideration given.

1) The following amendments to K-IFRSs have been applied in the current year and have affected the amounts reported in these separate financial statements.

   Amendments to K-IFRS 1107 − *Financial Instruments: Disclosures*

   The Company may have transferred financial assets in such a way that part or all of the transferred financial assets do not qualify for derecognition. The amendments to K-IFRS 1107 increase the disclosure requirements for transactions involving transfers of financial assets in order to provide greater transparency around the nature of the transferred assets, the nature of the risks and rewards of ownership to which the Company is exposed, description of the nature of the relationship between the transferred assets and the associated liabilities and carrying value of the associated liabilities.

   When the Company continues its involvement on the transferred assets although the transferred assets are derecognized in their entirety, the Company discloses the carrying amounts of the transferred assets and the associated liabilities and the information showing maximum exposure to loss. The disclosures due to the application of these amendments are disclosed in Note 31-(3).

Amendments to K-IFRS 1001 – *Presentation of Financial Statements*

In accordance with the amendments to K-IFRS 1001, the Company presented operating income by deducting cost of sales and selling, general and administrative expenses from revenue line item. The amendments have been applied retrospectively for the comparative period.

The amendments have been applied retrospectively, and hence, the presentation of items of operating income has been changed with follows (in millions of Korean won):

	2012		2011	
	Before modification	After modification	Before modification	After modification
Sales	₩1,851,875	₩1,841,081	₩1,944,508	₩1,930,096
Operating expense	(1,710,329)	(1,697,429)	(1,749,273)	(1,736,005)
Operating income	141,546	143,652	195,235	194,091
Non-operating expense	(33,403)	(35,509)	(24,557)	(23,413)
Income before income tax expense	₩108,143	₩108,143	₩170,678	₩170,678

The amendments do not result in any impact on net income and earnings per shares.

2) The Company has not applied the following new and revised K-IFRSs that have been issued, but are not yet effective.

Amendments to K-IFRS 1001 – *Presentation of Financial Statements*

The amendments to K-IFRS 1001 require items of other comprehensive income to be grouped into two categories in the other comprehensive income section: (a) items that will not be reclassified subsequently to profit or loss and (b) items that may be reclassified subsequently to profit or loss when specific conditions are met. The amendments are effective for annual periods beginning on or after July 1, 2012. The Company does not anticipate that these amendments referred above will have a significant effect on the Company's separate financial statements and disclosures.

Amendments to K-IFRS 1019 –*Employee Benefits*

The amendments to K-IFRS 1019 require the recognition of changes in defined benefit obligations and in fair value of plan assets when they occur and, hence, eliminate the 'corridor approach' permitted under the previous version of K-IFRS 1019 and accelerate the recognition of past service costs. The amendments to K-IFRS 1019 are effective for annual periods beginning on or after January 1, 2013. The Company anticipates that these amendments referred to above will have no effect on the Company's separate financial statements and disclosures.

Amendments to K-IFRS 1032 –*Financial Instruments: Presentation*

The amendments to K-IFRS 1032 clarify existing application issue relating to the offset of financial assets and financial liabilities requirements. Specifically, the amendments clarify the meaning of 'currently has a legally enforceable right of setoff' and 'simultaneous realization and settlement.' The Company's right to offset must not be conditional on the occurrence of future events, but enforceable anytime during the contract periods, during the ordinary course of business with counterparty, a default of counterparty and master netting agreement or in some forms of non-recourse debt. The amendments to K-IFRS 1032 are effective for annual periods beginning on January 1, 2014. The Company is in the process of evaluating the impact on its separate financial statements upon the adoption of amendments.

Amendments to K-IFRS 1107 –*Financial Instruments: Disclosures*

The amendments to K-IFRS 1107 are mainly focusing on presentation of the offset between financial assets and financial liabilities. The amendments to K-IFRS 1107 are effective for annual periods beginning on or after January 1, 2013. The Company does not anticipate that these amendments referred above will have a significant effect on the Company's separate financial statements and disclosures.

K-IFRS 1113 –*Fair Value Measurement*

K-IFRS 1113 establishes a single source of guidance for fair value measurements and disclosure about fair value measurements. This standard defines fair value, establishes a framework for measuring fair value and requires disclosures about fair value measurements. This standard is effective for annual periods beginning on or after January 1, 2013. The Company is reviewing the impact of the application of this standard on its separate financial statements.

(2) Investments in subsidiaries, joint ventures and associates

The deemed costs of investments in subsidiaries, joint ventures and associates were recognized as carrying amounts in conformity with previous GAAP (K-GAAP) at the transition date to K-IFRSs. Meanwhile, the investments in subsidiaries, joint venture and associates have been measured by cost method after the transition date to K-IFRSs.

(3) Foreign currency translation

1) Functional currency and presentation currency

The Company's separate financial statements are presented in the currency of the primary economic environment in which the Company operates (its functional currency). Both the functional currency of the Company and the presentation currency for the separate financial statements of the Company is Korean won.

2) Foreign currency transactions and translation of balance

In preparing the separate financial statements of the Company, transactions in foreign currencies are translated by using the functional currency when transactions occur or are revaluated if transactions need revaluation. Settlement of transactions in foreign currencies and gain (loss) on translation of monetary items are recognized in profit or loss. Risk-hedged amounts of cash flow hedges that satisfy requirements and net investments to foreign business are postponed in shareholders' equity.

(4) Cash and cash equivalents

Cash and cash equivalents include cash on hand; demand deposits; and short-term, highly liquid investments with maturities (or date of redemption) of three months or less upon acquisition. Bank overdraft is included in short-term borrowing account in the separate statements of financial position.

(5) Financial assets

1) Classification of financial assets

Financial assets are classified into the following specified categories: 'financial assets at fair value through profit or loss (FVTPL),' 'loans and receivables,' 'available-for-sale (AFS) financial assets' and 'held-to-maturity investments.' The classification depends on the nature and purpose of the financial assets and is determined at the time of initial recognition.

a) Financial assets at FVTPL
FVTPL includes financial assets classified as held for trading and financial assets designated at FVTPL upon initial recognition. A financial asset is classified as FVTPL if it has been acquired principally for the purpose of selling or repurchasing it in the near term. All derivative assets, except for derivatives that are designated and effective hedging instruments, are classified as held-for-trading financial assets.

b) Loans and receivables

   Loans and receivables are non-derivative financial assets with fixed or determinable payments that are not quoted in an active market. Loans and receivables that have maturities of more than 12 months from the end of the reporting period are classified as non-current assets; otherwise, they are classified as current assets.

c) AFS financial assets

   AFS financial assets are non-derivative financial assets that are designated as AFS or are not classified as loans and receivables, held-to-maturity investments or financial assets at FVTPL. AFS financial assets are classified as non-current assets, unless management has intention to sell them within 12 months as of the end of the reporting period.

d) Held-to-maturity investments

   Held-to-maturity investments are non-derivative financial instruments with fixed or determinable payments and fixed maturity that the Company has the positive intention and ability to hold to maturity. Held-to-maturity investments that have maturities of more than 12 months from the end of the reporting period are classified as non-current assets; otherwise, they are classified as current assets.

2) Recognition and measurement of financial assets

All financial assets are recognized on trade date when the purchase or sale of a financial asset is under contracts whose terms require delivery of the financial asset within the time frame established by the market concerned, and are initially measured at fair value, plus transaction costs, except for those financial assets classified as at FVTPL that are initially measured at fair value and related transaction costs are recognized in profit or loss.

Financial assets at FVTPL and AFS financial assets are subsequently measured at fair value. Loans and receivables and held-to-maturity investments are measured at amortized cost using the effective interest method.

Gains or losses arising from changes in fair value of financial assets at FVTPL are recognized in other non-operating income (expenses) line item in the separate statements of income. Dividends on financial assets at FVTPL are recognized in the finance income line item when the Company’s right to receive the dividends is established.

The changes in fair value of monetary or non-monetary securities, which were classified as AFS financial assets, are recognized as other comprehensive income. When AFS financial assets are disposed of or are determined to be impaired, the cumulative gain or loss previously accumulated in the AFS revaluation reserve is reclassified to profit or loss.

Interest calculated using the effective interest method is recognized in the finance income line item. Dividends on AFS financial assets are recognized in the finance income line item when the Company's right to receive the dividends is established.

3) Impairment of financial assets

- Financial assets measured at amortized cost
  The Company assesses at the end of each reporting period whether there is any objective evidence that a financial asset is impaired. Financial assets are considered to be impaired when there is objective evidence that, as a result of one or more events that occurred after the initial recognition of the financial asset, the estimated future cash flows of the investment have been affected.

  Impairment loss is the difference between the asset's carrying amount and the present value of estimated future cash flows, excluding future credit losses that have not been incurred, discounted at the financial asset's original effective interest rate at initial recognition. The carrying amount of the financial asset is reduced by the impairment loss and the amount of the loss is recognized in profit or loss. The Company measures impairment loss based on fair value of financial assets from observable market data.

  If, in a subsequent period, the amount of the impairment loss decreases and the decrease can be related objectively to an event occurring after the impairment was recognized, the previously recognized impairment loss is reversed and recognized in profit or loss.

- AFS financial assets
  The Company assesses at the end of each reporting period whether there is any objective evidence that a financial asset or a group of financial assets is impaired. For equity investments classified as AFS, a significant or prolonged decline in the fair value of the security below its cost is considered to be objective evidence of impairment. If there is objective evidence of impairment on AFS financial assets, the cumulative loss that has been recognized in other comprehensive income, less any impairment loss previously recognized in profit or loss, is reclassified from equity to profit or loss. Impairment losses recognized in profit or loss for an investment in an equity instrument classified as AFS are not reversed through profit or loss.

  Meanwhile, if, in a subsequent period, the fair value of a debt instrument classified as AFS increases and the increase can be objectively related to an event occurring after the impairment loss was recognized in profit or loss, the impairment loss is reversed through profit or loss to the extent that the carrying amount of the investment at the date the impairment is reversed does not exceed what the amortized cost would have been had the impairment not been recognized.

4) Derecognition of financial assets

The Company derecognizes a financial asset only when the contractual rights to the cash flows from the asset expire, or when it transfers the financial asset and substantially all the risks and rewards of ownership of the asset to another entity.

5) Offsetting financial assets and financial liabilities

Financial assets and financial liabilities are offset as a net amount in the separate statements of financial position when the Company has a legally enforceable right to set off the recognized amounts of the assets and liabilities and intends to settle on a net basis, or to realize the assets and the liabilities simultaneously.

(6) Accounts receivable

Accounts receivable is the amount owed by customer for products and services provided in the ordinary course of business. Accounts receivable expected to be collected within one year is classified as current assets; otherwise, it is classified as non-current assets. The Company recognizes accounts receivable as fair value when it occurs and presents net value offsetting the allowance for bad debts calculated by using the bad debt experienced and analysis about each receivable.

(7) Inventories

Inventories are stated at the lower of cost and net realizable value. Cost of inventories includes fixed and variable manufacturing overhead costs, which are systematically allocated to inventories by appropriate methods based on each category of inventory. The cost of inventories is determined by using the averaging method except for materials in transit (the specific identification method) and the merchandise of Glonet business unit (the moving-average method). During the year, perpetual inventory systems are used to value inventories, which are adjusted to physical inventory counts performed at the end of the year.

The Company periodically reviews changes in net realizable value of inventories due to damage, obsolescence, decline in selling prices and others and recognizes loss on inventory valuation. Net realizable value for merchandise, finished goods and work in progress represents the estimated selling price for inventories, less all estimated costs of completion and costs necessary to make the sale and current replacement cost for raw materials.

Loss on inventory valuation is charged to cost of sales when it is ordinary and to other non-operating expense when it is extraordinary. When the circumstances that previously caused inventories to be written down below cost no longer exist and the new market value of inventories subsequently recovers, the valuation loss is reversed to the extent of the original valuation loss and the reversal is deducted from cost of sales.

(8) Property, plant and equipment

Property, plant and equipment are stated at cost, less, subsequent accumulated depreciation and accumulated impairment losses. When the useful life of each part of an item of property, plant and equipment is different from that of the item, the part is recognized separately. The cost of an item of property, plant and equipment is directly attributable to its purchase or construction, including the initial estimate of the costs of dismantling and removing the item and restoring the site on which it is located.
Subsequent costs incurred to add to or replace part of previously recognized item of property, plant and equipment are added to the carrying amount of an asset or recognized as a separate asset if it is probable that future economic benefits associated with the assets will flow into the Company and the cost of the asset can be measured reliably. The carrying amount of what was replaced is derecognized. Routine maintenance and repairs are expensed as incurred.

Depreciation expense for property, plant and equipment is computed using the straight-line method with the acquiring costs, except residual value of assets based on the estimated useful lives of the assets as below. For the lease assets, the Company depreciates during the minimum of lease contract period and useful lives of the lease assets if it is not certain to acquire the ownership of the lease assets till the end of the lease contract.

	Estimated useful lives (in years)
Buildings	5–50
Structures	2–30
Machinery	2–15
Tools, furniture, fixtures and other	2–10

If each part of an item of property, plant and equipment has a cost that is significant in relation to the total cost of the item, it is depreciated separately.

The Company reviews the depreciation method, the estimated useful lives and residual values of property, plant and equipment at the end of each annual reporting period. If expectations differ from previous estimates, the changes are accounted for as a change in an accounting estimate.

The Company eliminates the carrying amount of asset when it is hard to expect inflow of future economic benefits incurred by disposal or using it. The gain or loss on derecognition of an item of property, plant and equipment is determined as the difference between the net disposal amounts and the carrying amount of the item and is recognized in the other income line item.

(9) Intangible assets

Intangible assets are initially measured at cost and are carried at cost less accumulated amortization and accumulated impairment losses. Subsequent expenditure on an intangible asset is capitalized only when it is probable that the expected future economic benefits that are attributable to the asset will increase.

Intangible assets other than goodwill and intangibles with indefinite useful lives are amortized using the straight-line method with acquiring cost, except residual value, with the amortization beginning when the asset is available for use. The estimated useful lives of the assets are as follows:

	Estimated useful lives (in years)
Development costs	5–10
Industrial rights	5
Other intangible assets	4–10

However, useful lives of membership and other intangible assets are determined to be indefinite as there is no foreseeable limit to the period over which the assets are expected to generate net cash inflows for the Company and they are not amortized, and tested for impairment once a year.

The expenditure on development is capitalized if, and only if, all of the following can be demonstrated:

- the technical feasibility of completing the intangible asset so that it will be available for use or sale;
- the intention to complete the intangible asset and use or sell it;
- the ability to use or sell the intangible asset;
- how the intangible asset will generate probable future economic benefits;
- the availability of adequate technical, financial and other resources to complete the development and to use or sell the intangible asset; and
- the ability to measure reliably the expenditure attributable to the intangible asset during its development.

Capitalized development costs include expenditure on materials, salaries, wages and other employment-related costs of personnel directly engaged in generating assets and related overhead costs, which are systematically allocated. Capitalized development costs are amortized using the straight-line method over the estimated useful life and amortization expenses are included in cost of goods manufactured or amortization in selling, general and administrative expenses. The expenditure on research and development that does not meet the conditions noted above is recognized as an expense when it is incurred.

The estimated useful life and amortization method for intangible assets with finite useful lives are reviewed at the end of each reporting period, and for the assets that have been assessed as having indefinite useful life, the assessment is redone each period, with the effect of any changes in estimate being accounted for on a prospective basis.

(10) Investment properties

Investment properties are properties held to earn rentals and/or for capital appreciation. Investment properties are measured initially at cost, including transaction costs. Subsequent to initial recognition, the book value of investment property is presented at the cost, less accumulated depreciation and accumulated impairment.

While land is not depreciated, all other investment property is depreciated using the straight-line method from 10 to 60 years.

The estimated useful lives, residual values and depreciation method are reviewed at the end of each reporting period, with the effect of any changes in estimate accounted for on a prospective basis.

(11) Borrowing costs

Borrowing costs directly attributable to the acquisition, construction or production of qualifying assets, which are assets that necessarily take a substantial period of time to get ready for their intended use or sale, are added to the cost of those assets, until such time as the assets are substantially ready for their intended use or sale. All other borrowing costs are recognized in profit or loss in the period in which they are incurred.

(12) Impairment of non-financial assets

1) Impairment of non-financial assets, except for goodwill

At the end of each reporting period, the Company reviews the carrying amounts of its non-financial assets, except for goodwill, to determine whether there is any indication that those assets have suffered an impairment loss. If any such indication exists, the recoverable amount of the asset is estimated in order to determine the extent of the impairment loss (if any). Where it is not possible to estimate the recoverable amount of an individual asset, the Company estimates the recoverable amount of the cash-generating unit to which the asset belongs. Intangible assets with indefinite useful lives and intangible assets not yet available for use are tested for impairment at least annually regardless of an indication that the asset may be impaired.

If the recoverable amount of an asset (or a cash-generating unit) is estimated to be less than its carrying amount, the carrying amount of the asset (or the cash-generating unit) is reduced to its recoverable amount. An impairment loss is recognized immediately in profit or loss.

Where an impairment loss subsequently reverses, the carrying amount of the asset (or a cash-generating unit) is increased to the revised estimate of its recoverable amount, but the increased carrying amount cannot exceed the carrying amount that would have been determined had no impairment loss been recognized for the asset (or the cash-generating unit) in prior years. A reversal of an impairment loss is recognized immediately in profit or loss.

2) Impairment of goodwill

Goodwill arising on a business combination is carried at cost as established at the date of acquisition of the business, less accumulated impairment losses, if any. For the purpose of a test for impairment, goodwill is allocated to a cash-generating unit that is predicted synergy effect from an acquisition of a business.

A cash-generating unit to which goodwill has been allocated is tested for impairment annually, or more frequently when there is indication that the unit may be impaired. If the recoverable amount of the cash-generating unit is less than its carrying amount, the impairment loss is allocated first to reduce the carrying amount of any goodwill allocated to the unit and then to the other assets of the unit on a pro rata basis based on the carrying amount of each asset in the unit. Any impairment loss for goodwill is recognized directly in profit or loss in the separate statements of income. An impairment loss recognized for goodwill cannot be reversed in subsequent periods.

(13) Borrowings

Borrowings are measured at fair value, net of transaction costs and subsequently measured at amortized cost using the effective interest method, with interest expense being recognized on an effective yield basis. The difference between the amount received and the redemption amount is amortized using the effective interest method and recognized in profit or loss. Borrowings are classified as non-current liabilities when the Company has an unconditional right to defer settlement of the liability for at least 12 months after the end of the reporting period; otherwise, borrowings are classified as current liabilities.

(14) Financial guarantee contract liabilities

The Company has financial guarantee contract liabilities, which are obligations to pay specific amounts for indemnity about creditors' loss on insolvency of specific debtors according to initial and revised contract condition of liabilities on the payment date. Financial guarantee contract liabilities are initially measured at their fair value except direct cost relating the issuance. Subsequently, financial guarantee contract liabilities are measured at the higher of the amount of the obligation under the contract, as determined in accordance with K-IFRS 1037, *Provisions, Contingent Liabilities and Contingent Assets*, and the amount initially recognized is less cumulative amortization recognized in accordance with the K-IFRS 1018, *Revenue.*

(15) Retirement benefit obligation

The Company operates a defined benefit pension plan. For defined benefit pension plans, the cost of providing benefits is determined using the projected unit credit method, with actuarial valuations being carried out at the end of each reporting period. Present value of the defined benefit obligation is calculated by discounting estimated future cash outflows by market yields on high-quality corporate bonds (public debt or national), with similar maturity.

Actuarial gain or loss from changes in actuarial assumptions or differences between actuarial assumptions and actual results is recognized in other comprehensive income in the separate statements of comprehensive income, which is immediately recognized as retained earnings. Actuarial gains and losses recognized in other comprehensive income are not reclassified to profit or loss, but are immediately recognized in retained earnings. Past service cost is recognized immediately to the extent that the benefits are already vested, and, if not vested, the cost is amortized on a straight-line basis over the average period until the benefits become vested.

The retirement benefit obligation recognized in the separate statements of financial position represents the present value of the defined benefit obligation as adjusted for unrecognized actuarial gains and losses and unrecognized past service cost, and as reduced by the fair value of plan assets. Any asset resulting from this calculation is limited to unrecognized actuarial losses and past service cost, plus the present value of available refunds and reductions in future contributions to the plan.

(16) Provisions

Provisions are recognized when the Company has a present obligation (legal or constructive) as a result of a past event, it is probable that the Company will be required to settle the obligation and a reliable estimate can be made of the amount of the obligation. A provision is measured using the present value of the cash flows estimated to settle the present obligation when the effect of the time value of money is material. At the end of each reporting period, the remaining provision balance is reviewed and assessed to determine if the current best estimate is being recognized. The increase in provision due to passage of time is recognized as interest expense. If the existence of an obligation to transfer economic benefit is no longer probable, the related provision is reversed during the period.

When some or all of the economic benefits required to settle a provision are expected to be recovered from a third party, a receivable is recognized as an asset if it is virtually certain that reimbursement will be received and the amount of the receivable can be measured reliably; in the separate statements of income, a net amount is presented, being the anticipated cost of the obligation less the reimbursement.

(17) Leases

Leases are classified as finance leases whenever the terms of the lease transfer substantially all the risks and rewards of ownership to the lessee. All other leases are classified as operating leases.

1) The Company as lessor

Amounts due from lessees under finance leases are recognized as receivables at the amount of the Company's net investment in the leases. Interest income is recognized using the effective interest method on the part of the Company's net investment in the leases, which is not collected yet.

Rental income from operating leases is recognized on a straight-line basis over the term of the relevant lease. Initial direct costs incurred in negotiating and arranging an operating lease are added to the carrying amount of the leased asset and recognized on a straight-line basis over the lease term.

2) The Company as lessee

Assets held under finance leases are initially recognized as assets of the Company at their fair value at the inception of the lease or, if lower, at the present value of the minimum lease payments. Lease payments are apportioned between finance expenses and reduction of the lease obligation, so as to achieve a constant rate of interest on the remaining balance of the liability. Finance expenses are recognized immediately in profit or loss, unless they are directly attributable to qualifying assets, in which case they are capitalized in accordance with the Company's general policy on borrowing costs. Adjusted lease payments are recognized as expenses in the periods in which they are incurred.

Operating lease payments are recognized as an expense on a straight-line basis over the lease term, except where another systematic basis is more representative of the time pattern in which economic benefits from the leased asset are consumed. Adjusted lease payments arising under operating leases are recognized as an expense in the period in which they are incurred.

(18) Derivative financial instruments

Derivatives are initially recognized at fair value at the date the derivative contract is entered into and are subsequently remeasured to their fair value at the end of each reporting period. The resulting gain or loss is recognized in profit or loss immediately, unless the derivative is designated and effective as a hedging instrument, in such case, the timing of the recognition in profit or loss depends on the nature of the hedge relationship.

A derivative with a positive fair value is recognized as a financial asset and a derivative with a negative fair value is recognized as a financial liability. A derivative is presented as a non-current asset or a non-current liability if the remaining maturity of the instrument is more than 12 months and it is not expected to be realized or settled within 12 months. Other derivatives are presented as current assets or current liabilities.

1) Hedge accounting

The Company operates fair value hedges to avoid the risk of fair value change, which is incurred from specific risk on assets, liabilities and firm contracts, and cash flow hedges to avoid the risk of future cash flow change, which is incurred from specific risk on expecting contracts.

At the inception of the hedge relationship, the entity documents the relationship between the hedging instrument and the hedged item, along with its risk management objectives and its strategy for undertaking various hedge transactions. Furthermore, at the inception of the hedge and on an ongoing basis, the Company documents whether the hedging instrument is highly effective in offsetting changes in fair values or cash flows of the hedged item.

a) Fair value hedges

Changes in the fair value of derivatives that are designated and qualified as fair value hedges are recognized in profit or loss immediately, together with any changes in the fair value of the hedged asset or liability that are attributable to the hedged risk.

Hedge accounting is discontinued when the Company revokes the hedging relationship; when the hedging instrument expires or is sold, terminated or exercised; or it no longer qualifies for hedge accounting. The adjusted amount of hedged item's carrying amount is depreciated and is recognized in profit or loss since hedge accounting is discontinued.

b) Cash flow hedges

The effective portion of change in the fair value of derivatives that are designated and qualify as cash flow hedges for decreasing risk incurred from change of future cash flow on forecast transaction is recognized in other comprehensive income. The gain or loss relating to the ineffective portion is recognized immediately in the other non-operating income (expense) line item in the separate statements of income.

Amounts previously recognized in other comprehensive income and accumulated in equity are reclassified to profit or loss in the periods when the hedged item is recognized in profit or loss.

Hedge accounting is discontinued when the Company revokes the hedging relationship; when the hedging instrument expires or is sold, terminated or exercised; or it no longer qualifies for hedge accounting. Any gain or loss accumulated in equity at that time remains in equity and is recognized when the forecast transaction is ultimately recognized in profit or loss. When a forecast transaction is no longer expected to occur, the gain or loss accumulated in equity is recognized immediately in profit or loss.

2) Other derivative financial instruments

Derivative financial instruments other than the effective portion of derivative financial instruments that are designated as the hedging instruments are measured at fair value. Gain or loss on valuation incurred from change of fair value is recognized in profit or loss.

(19) Dividend

Dividend payable is recognized as liability when declaration of the dividend is approved at the shareholders' meeting.

(20) Share-based payment arrangement

The Company recognizes share options granted to employees at the fair value at the grant date. The fair value determined at the grant date of the share option is expensed on a straight-line basis over the vesting period. The Company determines fair value of share option using the Black-Scholes model.

(21) Revenue recognition

Revenue is measured at the fair value of the consideration received or receivable for the sale of goods and rendering of services arising in the course of the ordinary activities of the Company. Revenue is reduced for value-added tax, estimated customer returns, rebates and trade discounts and is presented after eliminating intercompany transactions. The Company recognizes revenue when the amount of revenue can be measured reliably and it is probable that the economic benefits associated with the transaction will flow to the Company and when transaction meets the revenue recognition criteria specified by activity.

1) Sales of goods

Revenue from the sale of goods is recognized when the Company has transferred the significant risks and rewards of ownership of the goods to the buyer. Revenue is recognized on initial delivery of the goods, net of expected discounts and returns estimated based on the historical data. The Company estimates and recognizes provision for warranty and sales return arising from sale of goods.

2) Rendering of services

Revenue from a contract to provide services is recognized by reference to the stage of completion of the contract. The completion progress is determined by using a method that can measure services provided reliably according to the attributes of contracts.

3) Other revenue

Royalty revenue is recognized on an accrual basis in accordance with the substance of the relevant agreement. Dividend income from investments is recognized when the right to receive payment has been established. Interest income is accrued on a timely basis, by reference to the principal outstanding and at the effective interest rate applicable, which is the rate that exactly discounts estimated future cash receipts through the expected life of the financial asset to that asset's net carrying amount on initial recognition. Rental income from operating leases is recognized on a straight-line basis over the term of the relevant lease.

(22) Government grants

Government grants, whose primary condition is that the Company should acquire non-current assets, are recognized as deduction of received assets or temporary assets for investing received assets before the related assets are acquired. When the related assets are acquired, they are recorded as a deduction from the acquired assets.

Meanwhile, government grants that have no specific condition to use are recognized in operating income when it is directly related to main operation. If not, government grants are recognized in other non-operating income. If there is a specific expense dealing with government grants, the Company offset them and recognizes in profit or loss.

(23) Income tax and deferred tax

Income tax expense is composed of current and deferred taxes. Current and deferred taxes are recognized in profit or loss, except when they relate to items that are recognized in other comprehensive income or directly in equity, in which case, the current and deferred taxes are also recognized in other comprehensive income or directly in equity, respectively.

Income tax (current tax) expense is the sum of corporate tax for each fiscal year and tax added to corporate tax under corporate income tax law and other laws. Additional income taxes or tax refunds for the prior periods are included in income tax expense for the current period when recognized. The Company's liability for current tax is calculated using tax rates that have been enacted or substantively enacted by the end of the reporting period.

Deferred tax is recognized on temporary differences between the carrying amounts of assets and liabilities in the financial statements and the corresponding tax bases used in the computation of taxable profit. Deferred tax assets and liabilities are not recognized if the temporary difference arises from the initial recognition (other than in a business combination) of other assets and liabilities in a transaction that affects neither the taxable profit nor the accounting profit.

Deferred tax assets and liabilities are measured at the tax rates that are expected to be applied in the period in which the liability is settled or the asset realized, based on tax rates (and tax laws) that have been enacted or substantively enacted by the end of the reporting period. The carrying amount of deferred tax assets is reviewed at the end of each reporting period and reduced to the extent it is no longer probable that sufficient taxable profits will be available to allow all or part of the asset to be recovered.

(24) Non-current assets held for sale

Non-current assets and disposal groups are classified as held for sale if their carrying amount will be recovered principally through a sale transaction rather than through continued use. This condition is regarded as met only when the sale is highly probable and the non-current asset (or disposal group) is available for immediate sale in its present condition. Management must be committed to the sale, which should be expected to qualify for recognition as a completed sale within one year from the date of classification.

Non-current assets (and disposal groups) classified as held for sale are measured at the lower of their previous carrying amount and fair value, less costs to sell.

(25) Distribution of non-cash assets to owners

Liability relating to distribution of non-cash assets to owners is recognized as fair value of asset that will be divided from the initial recognition. Meanwhile, the difference between the carrying amount of asset that will be divided and carrying amount of dividends payable is recognized in profit or loss.

(26) Segment information

Operating segments are reported on the same basis as financial information is reported to management. The Company’s management is responsible for evaluating the achievement of the operating segments and the resources that are allocated to the operating segments. Meanwhile, public notification relating to operating segments is presented in notes of separate financial statements.

(27) Approval of financial statements

The separate financial statements as of and for the year ended December 31, 2012, were approved by the board of directors on February 4, 2013.

3. SIGNIFICANT ACCOUNTING JUDGMENTS AND KEY SOURCES OF ESTIMATION UNCERTAINTIES:

In the application of the Company's accounting policies, management is required to make judgments, estimates and assumptions about the carrying amounts of assets and liabilities that are not readily apparent from other sources. The estimates and associated assumptions are based on historical experience and other factors that are considered to be relevant. Actual results may differ from those estimates. The estimates and underlying assumptions are reviewed on an ongoing basis.

Revisions to accounting estimates are recognized in the period in which the estimate is revised if the revision affects only that period. The revisions are recognized in the period of revision and future periods if the revision affects both current and future periods.

(1) Revenue recognition

Revenue from a contract to provide services is recognized by reference to the stage of completion of the contract. The stage of completion of the contract is determined as reasonable estimation and is subject to change as related factors change.

(2) Impairment of goodwill

The Company performs test for goodwill impairment annually. Recoverable amount of cash-generating units is based on calculation of value in use. The value-in-use calculation requires accounting estimates, that requires the directors to estimate the future cash flows expected to arise from the cash-generating unit and a suitable discount rate in order to calculate present value.

(3) Defined benefit obligation

The Company operates a defined benefit pension plan, which is funded by the Company and managed by insurance companies and trustees, based on actuarial calculations performed periodically. The assumptions about the method are based on discount rate, expected rate of salary increase and expected rate of return on plan assets; these estimates may contain significant uncertainty.

(4) Warranty provision

The Company provides warranty for product at the time of related revenue recognition (at the time of sale). Provisions for the expected cost of warranty obligations are recognized at the best estimate of the expenditure required to settle the Company's current and future obligations. These estimates may change in the future period due to additional provision under local legislation and practice.

(5) Deferred tax

Recognition and measurement of deferred tax assets and liabilities require the management's judgment, in particular, whether to recognize if the scope of deferred tax assets is affected by management's judgment and assumption in the future.

4. FINANCIAL RISK MANAGEMENT:

The Company is exposed to various financial risks such as market risk (foreign currency risk and interest rate risk), credit risk and liquidity risk relating to the operations of the Company. The purpose of risk management policy is to minimize potential risks, which could have adverse effect on financial performance.

Financial risk management activities are performed by treasury and international finance department, in accordance with the aforementioned documented risk management policies. In addition, the Company enters into derivative contracts to hedge against certain risks.

(1) Market risk

1) Foreign currency risk

The Company is exposed to foreign currency risk since it makes transactions in foreign currencies. Foreign currency risk arises from forecast transactions, recognized assets and liabilities and net investments in foreign operations.

Foreign currency risk is managed by the Company's policy on foreign currencies. The Company's basis for foreign currency management is to reduce income/loss volatility. The Company reduces exposure to foreign currency risk by matching the inflow and the outflow of foreign currencies (natural hedge) and manages foreign currency risk by using currency derivatives, such as currency forwards, for the remaining exposure.

The book value of the Company's monetary assets and liabilities denominated in foreign currencies, which represents the maximum exposure to foreign currency risk, as of December 31, 2012 and 2011, is as follows (in millions of Korean won):

	December 31, 2012					December 31, 2011				
	USD	EUR	JPY	Others (*)	Total	USD	EUR	JPY	Others (*)	Total
Assets	₩90,475	₩5,325	₩1,480	₩10,327	₩107,607	₩145,801	₩5,656	₩1,670	₩9,213	₩162,340
Liabilities	(71,474)	(2,754)	(2,776)	(7,608)	(84,612)	(90,760)	(2,072)	(3,818)	(4,617)	(101,267)
Net assets (liabilities)	₩19,001	₩2,571	₩(1,296)	₩2,719	₩22,995	₩55,041	₩3,584	₩(2,148)	₩4,596	₩61,073

(*) Others are assets and liabilities denominated in foreign currencies other than USD, EUR and JPY

Net foreign currency translation gain/loss for the years ended December 31, 2012 and 2011, is ₩(550) million and ₩1,625 million, respectively.

A sensitivity analysis on the Company's income before tax for the period, assuming a 10% increase and decrease in currency exchange rates, for the years ended December 31, 2012 and 2011, is as follows (in millions of Korean won):

	Year ended December 31, 2012		Year ended December 31, 2011	
	10% decrease in KRW against foreign currency	10% increase in KRW against foreign currency	10% decrease in KRW against foreign currency	10% increase in KRW against foreign currency
Income before tax impact	₩2,300	₩(2,300)	₩6,107	₩(6,170)

The above sensitivity analysis is based on monetary assets and liabilities denominated in foreign currencies other than the Company's functional currency as of December 31, 2012 and 2011.

2) Interest rate risk

The Company's interest rate risk is related to borrowings and bank deposits with floating interest rates, and related interest income and expense are exposed to interest rate risk. The Company is exposed to interest rate risk mainly due to its borrowing with floating interest rates.

To manage its interest rate risk, the Company minimizes external borrowings using internal funds and reduces borrowings with high interest rates and maintains an appropriate balance between borrowings with floating interest rate and fixed interest rate and short-term and long-term borrowings. The Company manages its interest rate risk through regular monitoring and adjustments to the changing domestic and overseas markets conditions and nature of its interest rates.

The book value of the Company's financial assets and liabilities with floating interest rates exposed to interest rate risk as of December 31, 2012 and 2011, is as follows (in millions of Korean won):

	Year ended December 31, 2012	Year ended December 31, 2011
Financial assets	₩118,143	₩80,726
Financial liabilities	(40,000)	(89,966)
Net assets (liabilities)	₩78,143	₩(9,240)

A sensitivity analysis on the Company's income before tax assuming a 1% increase and decrease in interest rates as of December 31, 2012 and 2011, is as follows (in millions of Korean won):

	December 31, 2012		December 31, 2011	
	1% increase	1% decrease	1% increase	1% decrease
Income before tax impact	₩781	₩(781)	₩(92)	₩92

3) Price risk

The Company is exposed to equity price risks arising from its listed equity investments among AFS equity investments. The Company periodically measures the risk as the fair value or future cash flows of equity investments may fluctuate due to the changes in market prices. Important investments in the Company's portfolio are individually managed, and acquisition and disposal are approved by the Board of Directors.

(2) Credit risk

The credit risk refers to risk of financial losses to the Company when the counterparty defaults on the obligations of the contract and arises from the Company's normal transaction and investing activity. To manage credit risk, the Company evaluates the creditworthiness of each customer or counterparty considering the financial status, past experience and other factors. The Company establishes credit limit for each customer and counterparty.

The purpose of credit risk management is to maintain an efficient management of credit risk, provide prompt support for decision making and minimize loss through safety measures for receivables.

1) The maximum credit risk exposure

The maximum credit risk exposure for financial assets maintained by the Company and the book value for the financial assets as of December 31, 2012 and 2011, are as follows (in millions of Korean won):

		December 31, 2012	December 31, 2011
Loans and receivables	Cash and cash equivalents (Note 1)	₩139,212	₩155,802
	Current and non-current financial instruments	9,218	588
	Accounts and other receivable	291,424	386,970
Asset-backed securities (ABS) (short-term investment)		6,597	6,597
AFS financial assets (long-term investment) (Note 2)		7,000	7
Derivative assets		900	697
Deposits		19,100	16,892
Total		₩473,451	₩567,553

(Note 1) Cash on hand is excluded.

(Note 2) They are the Company's debt securities.

Apart from the above financial assets, financial guarantee liabilities of the Company are explained in Note 31.

2) The Company's receivables aging analysis as of December 31, 2012 and 2011, is as follows (in millions of Korean won):

	December 31, 2012						
	Individually impaired receivables	Receivables assessed for impairment on a collective basis					Total
		Within due	0–3 months	3–6 months	6–12 months	More than 12 months	
Accounts receivable	₩5,395	₩262,166	₩24,017	₩2,088	₩1,527	₩718	₩295,911
Other receivables	1,383	10,611	1,722	241	995	260	15,212
Accrued income	-	247	-	-	-	-	247
Loans	5	3,538	-	-	-	-	3,543
Total	₩6,783	₩276,562	₩25,739	₩2,329	₩2,522	₩978	₩314,913

	December 31, 2011						
	Individually impaired receivables	Receivables assessed for impairment on a collective basis					Total
		Within due	0–3 months	3–6 months	6–12 months	More than 12 months	
Accounts receivable	₩3,152	₩360,888	₩7,655	₩6,624	₩1,523	₩45	₩379,887
Other receivables	1,683	19,726	5,357	452	503	16	27,737
Accrued income	-	1,101	-	-	-	-	1,101
Loans	5	3,173	-	-	-	-	3,178
Total	₩4,840	₩384,888	₩13,012	₩7,076	₩2,026	₩61	₩411,903

An allowance account is recognized by applying appropriate allowance rate for receivables that can be assessed to be impaired individually due to insolvency, bankruptcy and others. Group of financial assets that are not individually significant and have similar credit risk characteristics are assessed for impairment on a collective basis. An allowance account is recognized based on aging analysis and the Company's past experience of receivables collection.

AFS financial assets, held-to-maturity financial assets, deposits in financial institutions and derivative instruments are individually assessed to be impaired.

(3) Liquidity risk

Liquidity risk is the risk that the Company will encounter difficulty in meeting its financial liabilities obligations related to its financing for its operation. The Company forecasts cash flows from operating, investing and financing activities through a cash flow budget.

A summary of the Company's non-derivative liabilities maturity as of December 31, 2012 and 2011, is as follows (in millions of Korean won):

		December 31, 2012				
		Nominal cash flows according to contract				
	Book value	Total	Less than 1 year	1–2 years	2–5 years	More than 5 years
Financial liabilities	₩985,721	₩989,618	₩368,187	₩128,712	₩411,025	₩81,694
Interest on financial liabilities	-	99,925	33,328	27,580	32,610	6,407
Total	₩985,721	₩1,089,543	₩401,515	₩156,292	₩443,635	₩88,101

		December 31, 2011				
		Nominal cash flows according to contract				
	Book value	Total	Less than 1 year	1–2 years	2–5 years	More than 5 years
Financial liabilities	₩1,026,445	₩1,029,359	₩476,153	₩104,739	₩446,738	₩1,729
Interest on financial liabilities	-	92,353	28,024	23,170	40,979	180
Total	₩1,026,445	₩1,121,712	₩504,177	₩127,909	₩487,717	₩1,909

The above maturity analysis is based on undiscounted cash flow according to contract, which is different from non-derivative liabilities in the separate statements of financial position.

Apart from the above non-derivative liabilities, as of December 31, 2012, financial guarantee contract liabilities of the Company are explained in Note 31.

(4) Capital risk

The Company performs capital risk management to maintain its ability to continuously provide profits to shareholders and parties in interest and to maintain optimum capital structure to reduce capital expenses.

The Company manages its capital structure, through dividend payments to shareholders, returns capital to shareholders and issues new shares and sells its assets for debt reduction. Debt-to-equity ratio calculated as total liabilities divided by equity is used as an index to manage the Company's capital similar to overall industry practice.

Debt-to-equity ratios as of December 31, 2012 and 2011, are as follows (in millions of Korean won):

	December 31, 2012	December 31, 2011
Total liabilities	₩1,171,728	₩1,209,518
Total equity	1,918,355	1,968,126
Debt-equity ratio	61.08%	61.46%

5. RESTRICTED FINANCIAL ASSETS:

Details of restricted financial assets as of December 31, 2012 and 2011, are as follows (in millions of Korean won):

	December 31, 2012	December 31, 2011	Description
Long-term financial instruments	₩17	₩17	Bank transaction deposits
Deposits	15	15	Establish the right of pledge
Total	₩32	₩32	

6. SHORT-TERM INVESTMENT SECURITIES:

Short-term investment securities as of December 31, 2012 and 2011, are summarized as follows (in millions of Korean won):

	December 31, 2012	December 31, 2011
Asset-backed security	₩6,597	₩6,597

Asset-backed security is carried at cost, because there is no quoted market price and its fair value cannot be measured reliably.

7. ACCOUNTS AND OTHER RECEIVABLES:

(1) Accounts and other receivables as of December 31, 2012 and 2011, consist of the following (in millions of Korean won):

	December 31, 2012			December 31, 2011		
	Gross	Allowance for doubtful accounts	Carrying value	Gross	Allowance for doubtful accounts	Carrying value
Current						
Accounts receivable	₩295,730	₩(21,770)	₩273,960	₩379,706	₩(23,055)	₩356,651
Other receivables	14,821	(1,142)	13,679	27,279	(1,235)	26,044
Accrued income	247	-	247	1,101	-	1,101
Loans	633	(5)	628	894	(5)	889
Total	₩311,431	₩(22,917)	₩288,514	₩408,980	₩(24,295)	₩384,685
Non-Current						
Accounts receivable	₩181	₩(181)	₩-	₩181	₩(181)	₩-
Other receivables	391	(391)	-	458	(458)	-
Loans	2,910	-	2,910	2,284	-	2,284
Total	₩3,482	₩(572)	₩2,910	₩2,923	₩(639)	₩2,284

(2) The changes in allowance for doubtful accounts are as follows (in millions of Korean won):

	December 31, 2012				
	January 1, 2012	Increase	Written off	Other	December 31, 2012
Accounts receivable	₩(23,055)	₩821	₩415	₩49	₩(21,770)
Other receivables	(1,235)	(21)	114	-	(1,142)
Short-term loans	(5)	-	-	-	(5)
Long-term accounts receivable	(181)	-	-	-	(181)
Long-term other receivables	(458)	67	-	-	(391)
Total	₩(24,934)	₩867	₩529	₩49	₩(23,489)

Receivables past due are assessed as impaired. An allowance account is individually recognized for receivables that can be assessed individually for impairment. An allowance account is recognized based on aging analysis and the Company's past experience of receivables collection for the group of financial assets that are not individually significant and have similar credit risk characteristics.

Bad debt expense is included in selling, general and administrative expenses and other non-operating expenses item in the separate statements of income.

8. INVENTORIES:

Inventories as of December 31, 2012 and 2011, are summarized as follows (in millions of Korean won):

	December 31, 2012			December 31, 2011		
	Acquisition cost	Valuation allowance	Book value	Acquisition cost	Valuation allowance	Book value
Merchandise	₩3,444	₩(340)	₩3,104	₩10,326	₩(414)	₩9,912
Finished goods	31,948	(3,740)	28,208	30,890	(4,261)	26,629
Work in progress	19,473	(192)	19,281	17,125	(331)	16,794
Raw materials	39,279	(1,626)	37,653	57,243	(3,428)	53,815
Materials in transit	8,704	-	8,704	17,684	-	17,684
Others	3,693	-	3,693	1,133	-	1,133
Total	₩106,541	₩(5,898)	₩100,643	₩134,401	₩(8,434)	₩125,967

Losses on inventory valuation charged to (Reversals of loss on inventory valuation deducted from) the cost of sales are amounted to ₩(2,536) million and ₩4,144 million for the years ended December 31, 2012 and 2011, respectively. Also, losses on inventory disposal are ₩4,076 million and ₩2,272 million for the years ended December 31, 2012 and 2011, respectively.

9. LONG-TERM INVESTMENT SECURITIES:

(1) Long-term investment securities as of December 31, 2012 and 2011, are summarized as follows (in millions of Korean won):

	December 31, 2012	December 31, 2011
AFS financial assets	₩10,608	₩3,690

(2) AFS financial assets

1) AFS securities as of December 31, 2012 and 2011, are summarized as follows (in millions of Korean won):

	December 31, 2012	December 31, 2011
Equity securities		
Investments in listed company		
Pharma Foods International	₩1,142	₩1,056
Investments in non-listed company		
Doosan Capital Co., Ltd.	1,037	1,037
The Korea Economic Daily	56	56
Parnas Hotel	50	50
Korea Housing Guarantee Co., Ltd.	464	464
Potato	-	300
Kang Won Ilbo	57	57
KMA Consultants Inc.	20	20
Subtotal	1,684	1,984
Beneficiary certificate		
Korea Development Bank	4	4
Monetary Bond Trust		
Subordinated beneficiary certificate	7,000	-
Subtotal	7,004	4
Investments in funds		
Software Mutual Benefit Association	50	50
Engineering Mutual Benefit Association	14	14
Korea Defense Industry Association	324	324
Korea Marine Equipment Association	1	1
Machinery Financial Cooperative	250	250
Construction Guarantee	139	-
Subtotal	778	639
Debt securities		
Seoul city train bond	-	5
Kyung-nam region development bond	-	2
Subtotal	-	7
Total	₩10,608	₩3,690

Investment in non-listed company, beneficiary certificate, investments in funds and debt securities are carried at cost, because there is no quoted market price and their fair value cannot be measured.

2) Changes in unrealized gain on AFS financial assets for the years ended December 31, 2012 and 2011, are as follows (in millions of Korean won):

	Year ended December 31, 2012			
	January 1, 2012	Valuation	Reclassification from equity to profit or loss	December 31, 2012
Investments in listed company	₩1,027	₩86	₩-	₩1,113
Investments in non-listed company	437	-	-	437
Tax effect	(354)	(21)	-	(375)
Total	₩1,110	₩65	₩-	₩1,175

	Year ended December 31, 2011			
	January 1, 2011	Valuation	Reclassification from equity to profit or loss	December 31, 2011
Investments in listed company	₩688	₩339	₩-	₩1,027
Investments in non-listed company	437	-	-	437
Tax effect	(247)	(107)	-	(354)
Total	₩878	₩232	₩-	₩1,110

10. DERIVATIVES:

(1) Details of these derivatives contracts are as follows:

Derivatives contracts	Purpose	Description
Foreign currency forwards	Cash flow hedge	Adjustment from foreign currency sales to Korean won to avoid cash flow risk arising from foreign currency forecast sales
	Derivative instrument not designated as a hedge	Recognized in profit or loss of fair value changes in foreign currency forward
Interest rate swap	Derivative instrument not designated as a hedge	Recognized in profit or loss of gap between floating interest rate and fixed interest rate

(2) Details of gain and loss on valuation of derivatives as of December 31, 2012 and 2011, are as follows (in millions of Korean won, in thousands of foreign currency):

December 31, 2012

	Buy		Sell				
	Currency	Amount	Currency	Amount	Assets (liabilities)	Gains (losses)	Other comprehensive income (Note 1)
Foreign currency forwards	KRW	96,343	USD	88,535	₩736	₩-	₩736
	KRW	17,513	CNY	101,700	112	-	112
	USD	6,035	KRW	6,468	(1)	(1)	-
Interest rate swap	KRW	1,721	KRW	1,950	(226)	(160)	-
					₩621	₩(161)	₩848

December 31, 2011

	Buy		Sell				
	Currency	Amount	Currency	Amount	Assets (liabilities)	Gains (losses)	Other comprehensive income (Note 1)
Foreign currency forwards	KRW	182,916	USD	159,838	₩(2,757)	₩(144)	₩(3,434)
Interest rate swap	KRW	3,761	KRW	3,808	(47)	(47)	-
					₩(2,804)	₩(191)	₩(3,434)

(Note 1) Other comprehensive income does not reflect corporate tax effect.

Derivative instruments classified as financial assets at FVTPL and derivatives that are designated as hedging instruments are classified as non-current assets (liabilities) when their maturities are more than 12 months from the end of the reporting period; otherwise, they are classified as current assets (liabilities). Meanwhile, at applying cash flow hedge, there is no gain or loss relating to the ineffective portion, which is recognized in profit or loss for the year ended December 31, 2012.

11. FINANCIAL INSTRUMENTS:

(1) Categories of financial instruments as of December 31, 2012 and 2011, are as follows (in millions of Korean won):

	December 31, 2012					
	Financial assets at FVTPL	Loans and receivables	AFS financial assets	Derivatives designated as hedging instruments	Book value	Fair value
Cash and cash equivalents	₩-	₩139,212	₩-	₩-	₩139,212	₩139,212
Financial instruments	-	9,218	-	-	9,218	9,218
Investment securities	-	-	17,205	-	17,205	17,205
Trade and other receivables	-	291,424	-	-	291,424	291,424
Derivative assets	6	-	-	894	900	900
Deposits	-	19,100	-	-	19,100	19,100
Total	₩6	₩458,954	₩17,205	₩894	₩477,059	₩477,059

	December 31, 2012				
	Financial liabilities at FVTPL	Financial liabilities at amortized cost	Derivatives designated as hedging instruments	Book value	Fair value
Trade and other payables	₩-	₩272,748	₩-	₩272,748	₩272,748
Borrowings and bonds	-	712,973	-	712,973	712,973
Derivative liabilities	232	-	47	279	279
Total	₩232	₩985,721	₩47	₩986,000	₩986,000

	December 31, 2011					
	Financial assets at FVTPL	Loans and receivables	AFS financial assets	Derivatives designated as hedging instruments	Book value	Fair value
Cash and cash equivalents	₩-	₩155,802	₩-	₩-	₩155,802	₩155,802
Financial instruments	-	588	-	-	588	588
Investment securities	-	-	10,287	-	10,287	10,287
Trade and other receivables	-	386,969	-	-	386,969	386,969
Derivative assets	697	-	-	-	697	697
Deposits	-	16,892	-	-	16,892	16,892
Total	₩697	₩560,251	₩10,287	₩-	₩571,235	₩571,235

	December 31, 2011				
	Financial liabilities at FVTPL	Financial liabilities at amortized cost	Derivatives designated as hedging instruments	Book value	Fair value
Trade and other payables	₩-	₩302,766	₩-	₩302,766	₩302,766
Borrowings and bonds	-	723,679	-	723,679	723,679
Derivative liabilities	67	-	3,434	3,501	3,501
Total	₩67	₩1,026,445	₩3,434	₩1,029,946	₩1,029,946

(2) Fair value measurements of financial instruments by fair value hierarchy levels as of December 31, 2012 and 2011, are as follows (in millions of Korean won):

	December 31, 2012			
	Level 1	Level 2	Level 3	Total
Financial assets:				
Financial assets at FVTPL	₩-	₩6	₩-	₩6
AFS financial assets	1,142	-	-	1,142
Derivatives designated as hedging instruments	-	894	-	894
Total	₩1,142	₩900	₩-	₩2,042
Financial liabilities:				
Financial liabilities at FVTPL	₩-	₩(232)	₩-	₩(232)
Derivatives designated as hedging instruments	-	(47)	-	(47)
Total	₩-	₩(279)	₩-	₩(279)

	December 31, 2011			
	Level 1	Level 2	Level 3	Total
Financial assets:				
Financial assets at FVTPL	₩-	₩697	₩-	₩697
AFS financial assets	1,056	-	-	1,056
Total	₩1,056	₩697	₩-	₩1,753
Financial liabilities:				
Financial liabilities at FVTPL	₩-	₩(67)	₩-	₩(67)
Derivatives designated as hedging instruments	-	(3,434)	-	(3,434)
Total	₩-	₩(3,501)	₩-	₩(3,501)

Level 1: Unadjusted quoted prices in active markets for identical assets or liabilities.
Level 2: Inputs other than quoted prices that are observable for the asset or liability, either directly or indirectly.
Level 3: Inputs that are not based on observable market data (unobservable inputs).

The fair value of financial instruments traded in active markets is based on quoted market prices at the dates of the separate statements of financial position. These instruments are included in Level 1. Instruments included in Level 1 comprise primarily listed equity investments classified as trading securities or AFS.

The fair value of financial instruments that are not traded in an active market (for example, over-the-counter derivatives) is determined by using valuation techniques. These valuation techniques maximize the use of observable market data where it is available and rely as little as possible on entity-specific estimates. If all significant inputs required to fair value an instrument are observable, the instrument is included in Level 2.

If one or more of the significant inputs is not based on observable market data, the instrument is included in Level 3.

As for trade and other receivables, the book value approximates a reasonable estimate of fair value.

(3) Profit and loss by categories of financial instruments for the years ended December 31, 2012 and 2011, are as follows (in millions of Korean won) :

	Year ended December 31, 2012						
	Profit or loss						Other comprehensive income (Note 1)
	Interest	Dividends	Valuation	Impairment	Disposal	Exchange rate fluctuations	
Financial assets:							
Financial assets at FVTPL	₩-	₩-	₩6	₩-	₩446	₩-	₩-
Loans and receivables	4,983	-	-	867	-	(7,745)	-
AFS financial assets	439	3	-	-	-	-	86
Derivatives designated as hedging instruments	-	-	-	-	-	-	895
Total	₩5,422	₩3	₩6	₩867	₩446	₩(7,745)	₩981
Financial liabilities:							
Financial liabilities at FVTPL	₩-	₩-	₩(167)	₩-	₩-	₩-	₩-
Financial liabilities at amortized cost	(36,395)	-	227	-	(80)	4,393	-
Derivatives designated as hedging instruments	-	-	-	-	487	-	3,387
Total	₩(36,395)	₩-	₩60	₩-	₩407	₩4,393	₩3,387

	Year ended December 31, 2011						
	Profit or loss						Other comprehensive income (Note 1)
	Interest	Dividends	Valuation	Impairment	Disposal	Exchange rate fluctuations	
Financial assets:							
Financial assets at FVTPL	₩-	₩-	₩(162)	₩-	₩1,830	₩-	₩-
Loans and receivables	6,515	-	-	(1,425)	-	763	-
AFS financial assets	20	5	-	-	-	-	339
Derivatives designated as hedging instruments	-	-	-	-	434	-	(788)
Total	₩6,535	₩5	₩(162)	₩(1,425)	₩2,264	₩763	₩(449)
Financial liabilities:							
Financial liabilities at amortized cost	₩(33,071)	₩-	₩110	₩-	₩(71)	₩(901)	₩-
Derivatives designated as hedging instruments	-	-	(29)	-	-	-	(3,434)
Total	₩(33,071)	₩-	₩81	₩-	₩(71)	₩(901)	₩(3,434)

(Note 1) Other comprehensive income does not reflect corporate tax effect.

12. SUBSIDIARIES AND ASSOCIATES:

(1) Subsidiaries and associates as of December 31, 2012 and 2011, consist of the following (in millions of Korean won):

Companies	Location of incorporation	Percentage of ownership (%)	December 31, 2012	December 31, 2011
Subsidiaries:				
Oricom Inc. ("Oricom")	South Korea	71.71	₩23,168	₩23,168
Neoplux Co., Ltd. ("Neoplux") (Note 1)	South Korea	-	-	27,816
Neovalue Co., Ltd.("Neovalue") (Note 1)	South Korea	66.71	1,005	-
Doosan Tower Co., Ltd. ("Doosan tower")	South Korea	100.00	197,170	197,170
Doosan Feed & Livestock Co., Ltd. ("DFL")	South Korea	100.00	15,757	15,757
Doosan Electro-Materials Hong Kong Ltd. ("DSEH") (Note 2)	Hong Kong	100.00	-	-
Doosan Hong Kong Ltd. ("DSH") (Note 2)	Hong Kong	100.00	-	-
Doosan Electro-Materials Singapore Pte Ltd. ("DSES") (Note 2)	Singapore	100.00	-	-
Doosan (Shanghai) Chemical Materials Co., Ltd. (Note 2)	China	100.00	-	-
Doosan Bears Inc.	South Korea	100.00	1,138	1,138
N Shaper Corp. (Note 4)	South Korea	100.00	34,660	34,6600
Doosan Donga Co.	South Korea	100.00	29,477	29,477
DIP Holdings Company	South Korea	100.00	164,169	164,169
Doosan Information and Communications America LLC	USA	100.00	4,889	4,889
Doosan Information and Communications China LLC (Note 3)	China	100.00	3,230	2,156
Doosan Mottrol (Jiangyin) Co., Ltd. (Note 3)	China	100.00	33,587	22,175
Doosan Electro-Materials (Changshu) Co., Ltd.	China	100.00	45,964	45,964
Doosan Equipment Rental Vietnam Company Limited(Note 3)	Vietnam	100.00	10,676	-
Doosan Electro-Materials America, LLC(Note 3)	U.S.A.	100.00	282	-
Subtotal			565,172	568,539
Associates:				
Doosan Heavy Industries & Construction Co., Ltd. ("DHC")	South Korea	49.02	1,220,122	1,220,122
Doosan Eco Biznet	South Korea	29.79	53	53
Guang Dong Xingpu Steel Center	South Korea	21.05	3,854	3,854
MVP Capital Co.	South Korea	29.13	279	387
Subtotal			1,224,308	1,224,416
Joint venture:				
Sichuan Kelun-Doosan Biotechnology Company Limited (Note 3)	China	50.00	2,526	1,634
Total			₩1,792,006	₩1,794,589

(Note 1) Neoplux Co., Ltd. (remaining company) and Neovalue Co., Ltd. (new company) split off from Neoplux Co., Ltd., which is subsidiary of the Company. Neoplux Co., Ltd. (remaining company) split off again and was eliminated from the financial statements of the Company. Meanwhile, Neovalue Co., Ltd., was newly founded. (see Note 36)

(Note 2) When the recoverable amount is lower than the carrying amount of capital encroachment subsidiaries, the Company recognized total amount for the prior periods.

(Note 3) In 2012, the Company newly invested in equity or acquired additional amount.

(2) Fair values of marketable investments in subsidiaries and associates as of December 31, 2012 and 2011, are as follows (in millions of Korean won):

Description	December 31, 2012		December 31, 2011	
	Book value	Fair value	Book value	Fair value
Subsidiary :				
Oricom	₩23,168	₩19,905	₩23,168	₩21,509
Associates :				
Doosan Heavy Industries Construction Co., Ltd.	1,220,122	1,972,763	1,220,122	2,841,303

13. PROPERTY, PLANT AND EQUIPMENT:

(1) Changes in property, plant and equipment for the years ended December 31, 2012 and 2011, consist of the following (in millions of Korean won):

	Year ended December 31, 2012					
	Land	Buildings and structures	Machinery	Tools, furniture, fixtures and others	Construction in progress	Total
Balance at January 1, 2012	₩169,524	₩66,811	₩135,025	₩44,685	₩12,844	₩428,889
Acquisition	-	726	9,743	26,022	39,428	75,919
Business combinations (Note 1)	1,628	369	-	98	-	2,095
Government subsidy	-	-	(80)	(44)	-	(124)
Reclassifications (Note 2)	(68,457)	1,266	38,137	(12,226)	(38,762)	(80,042)
Disposal	-	(55)	(1,294)	(1,302)	-	(2,651)
Depreciation	(43)	(4,332)	(24,775)	(14,519)	-	(43,669)
Balance at December 31, 2012	₩102,652	₩64,785	₩156,756	₩42,714	₩13,510	₩380,417
Acquisition cost	₩102,652	₩100,011	₩376,884	₩96,587	₩13,510	₩689,644
Accumulated depreciation and impairment	-	(35,226)	(218,644)	(53,775)	-	(307,645)
Government subsidy	-	-	(1,484)	(98)	-	(1,582)

(Note 1) The Company merged with DFMS for the year ended December 31, 2012. (see Note 35).

(Note 2) In addition to reclassification of construction in progress to other accounts, land and buildings in Anmyondo area for ranch and saltern business amounting to ₩69,283 million was reclassified as investment property for the year ended December 31, 2012.

	Year ended December 31, 2011					
	Land	Buildings and structures	Machinery	Tools, furniture, fixtures and others	Construction in progress	Total
Balance at January 1, 2011	₩169,708	₩61,789	₩76,316	₩20,717	₩8,493	₩337,023
Acquisition	-	769	20,057	66,481	40,624	127,931
Government subsidy	-	-	(361)	(22)	-	(383)
Reclassifications	-	8,093	59,390	(32,123)	(36,273)	(913)
Disposals	-	(49)	(322)	(199)	-	(570)
Depreciation	(43)	(3,791)	(20,055)	(10,169)	-	(34,058)
Others	(141)	-	-	-	-	(141)
Balance at December 31, 2011	₩169,524	₩66,811	₩135,025	₩44,685	₩12,844	₩428,889
Acquisition cost	₩169,567	₩98,026	₩337,565	₩95,553	₩12,844	₩713,555
Accumulated depreciation and impairment	(43)	(31,215)	(200,697)	(50,757)	-	(282,712)
Government subsidy	-	-	(1,843)	(111)	-	(1,954)

As of December 31, 2012, the Company's land and buildings are pledged as collateral for loans from Korea Development Bank and others. The Company has no right to pledge that asset as collateral or to sell (see Note 32).

(2) Property and equipment acquired through capital lease agreements as of December 31, 2012 and 2011, are as follows (in millions of Korean won):

Details	December 31, 2012	December 31, 2011
Acquisition cost	₩37,437	₩18,422
Accumulated depreciation	(12,560)	(3,746)
Balance, net	₩24,877	₩14,676

The actual increase amount of leased assets for the year ended December 31, 2012, is ₩19,015 million. Leased assets amount to ₩4,349 million was acquired in 2011, and transferred to leased assets in 2012 through capital lease agreements.

Total minimum lease payments of finance leases liabilities and present value as of December 31, 2012 and 2011, are as follows (in millions of Korean won):

	December 31, 2012		December 31, 2011	
	Minimum lease payments	Present value	Minimum lease payments	Present value
Less than 1 year	₩9,571	₩8,528	₩5,818	₩5,303
1–5 years	17,758	16,733	8,416	7,962
Total	27,329	₩25,261	14,234	₩13,265
Present value adjustment	(2,068)		(969)	
Finance lease payables	₩25,261		₩13,265	

As of December 31, 2012, the Company's leased assets under finance lease are pledged as collateral for obligations under finance leases, which have a carrying amount of ₩25,261 million (see Note 32).

14. INTANGIBLE ASSETS:

(1) Changes in intangible assets for the years ended December 31, 2012 and 2011, are as follows (in millions of Korean won):

	Year ended December 31, 2012				
	Goodwill	Industrial rights	Development costs	Other intangible assets	Total
January 1, 2012	₩86,577	₩808	₩3,330	₩17,933	₩108,648
Acquisition	-	473	641	2,767	3,881
Business combinations	6,420	-	-	1,964	8,384
Government subsidy	-	-	(104)	-	(104)
Reclassifications (Note 1)	-	-	-	10,759	10,759
Disposal	-	(4)	-	(428)	(432)
Amortization	-	(268)	(203)	(3,692)	(4,163)
Impairment	-	-	-	(1,593)	(1,593)
December 31, 2012	₩92,997	₩1,009	₩3,664	₩27,710	₩125,380
Acquisition cost	₩92,997	₩1,889	₩11,145	₩39,757	₩145,788
Accumulated depreciation and impairment	-	(880)	(6,938)	(12,047)	(19,865)
Government subsidy	-	-	(543)	-	(543)

(Note 1) Construction in progress was reclassified as other intangible asset due to completion of building ERP.

	Year ended December 31, 2011				
	Goodwill	Industrial rights	Development costs	Other intangible assets	Total
January 1, 2011	₩86,577	₩523	₩3,180	₩16,498	₩106,778
Acquisition	-	467	1,419	2,719	4,605
Government subsidy	-	-	(103)	-	(103)
Reclassifications	-	-	-	913	913
Disposal	-	-	-	(43)	(43)
Amortization	-	(182)	(1,166)	(1,941)	(3,289)
Others	-	-	-	(213)	(213)
December 31, 2011	₩86,577	₩808	₩3,330	₩17,933	₩108,648
Acquisition cost	₩86,577	₩1,420	₩10,503	₩24,695	₩123,195
Accumulated depreciation and impairment	-	(612)	(6,664)	(6,762)	(14,038)
Government subsidy	-	-	(509)	-	(509)

The carrying amount of membership with indefinite useful lives in other intangible assets item is ₩13,012 million and ₩12,927 million as of December 31, 2012 and 2011, respectively. Meanwhile, expenditure on research and development, which was recognized as expenses, amounted to ₩19,793 million and ₩20,954 million for the years ended December 31, 2012 and 2011, respectively.

(2) Impairment test of goodwill

Goodwill has been allocated for impairment testing purposes to the following cash-generating units and is tested for impairment annually.

Cash-generating units	Description
Mottrol BG	Manufacturing and sale of hydraulic components
Information and communications BU	Operating and development of software
FM BU	Building maintenance service

Before recognition of impairment losses, the carrying amount of goodwill was allocated to cash-generating units as follows (in millions of Korean won):

Cash-generating units	December 31, 2012	December 31, 2011
Mottrol BG	₩84,562	₩84,562
Information and communications BU	2,015	2,015
FM BU	6,420	-
Total	₩92,997	₩86,577

The recoverable amount of cash-generating unit is determined based on a value-in-use Calculation, and a discount rates used is as follows.

Description	Mottrol BG	Information and communications BU	FM BU
Discount rate	11.79%	11.41%	11.41%

The Company uses cash flow projections based on financial budgets approved by the directors covering five-year periods for a value-in-use calculation. The financial budgets are determined based on historical result and expectation of market growth. Cash flows beyond that five-year periods have been extrapolated using an 'zero(0)%' growth rate, continuing the 5th year cash flow. Meanwhile, the discount rates used reflect relevant risks specific to the cash-generating units.

The result of recoverable amount the Company calculated based on value-in-use calculation was not to cause the aggregate carrying amount to exceed the aggregate recoverable amount of the cash-generating unit. Therefore, no impairment loss is recognized based on the impairment test for the year ended December 31, 2012.

15. INVESTMENT PROPERTIES:

Changes in investment properties for the years ended December 31, 2012 and 2011, are as follows (in millions of Korean won):

	Year ended December 31, 2012		
	Land	Buildings	Total
January 1, 2012	₩119,493	₩3,634	₩123,127
Reclassifications	68,457	826	69,283
Depreciation	-	(297)	(297)
December 31, 2012	₩187,950	₩4,163	₩192,113
Acquisition cost	₩187,950	₩12,880	₩200,830
Accumulated depreciation and impairment	-	(8,717)	(8,717)

	Year ended December 31, 2011		
	Land	Buildings	Total
January 1, 2011	₩121,646	₩9,318	₩130,964
Disposal	(2,620)	(458)	(3,078)
Depreciation	-	(311)	(311)
Impairment	-	(4,448)	(4,448)
Others	467	(467)	-
December 31, 2011	₩119,493	₩3,634	₩123,127
Acquisition cost	119,493	11,768	131,261
Accumulated depreciation and impairment	-	(8,134)	(8,134)

The Company's land and buildings (Gun-po plant) included in the above investment property are pledged as collateral for loans from Hana Bank and others. The Company has no right of assets to sell or pledge as collateral for another loans (see Note 32).

The book value of investment property is presented at the cost, and the fair values of the Company's investment property at December 31, 2012 and 2011, are as follows (in millions of Korean won):

	December 31, 2012	December 31, 2011
Land	₩231,802	₩123,946
Buildings	4,846	3,358
Total	₩236,648	₩127,304

The recognized amount of rental income from investment property for the years ended December 31, 2012 and 2011, is ₩671 million and ₩432 million, respectively.

16. BONDS AND BORROWINGS:

(1) Bonds as of December 31, 2012 and 2011, are as follows (in millions of Korean won):

Type	Annual interest rate (%)	December 31, 2012	December 31, 2011
The 279-3rd	6.55	₩-	₩97,000
The 280-1st	4.44	40,000	40,000
The 280-2nd	5.64	50,000	50,000
The 281-1st	4.95	70,000	70,000
The 281-2nd	5.21	80,000	80,000
The 282-1st	4.40	50,000	50,000
The 282-2nd	4.99	80,000	100,000
The 283-1st	3.84	20,000	-
The 283-2nd	4.27	80,000	-
Subtotal		470,000	487,000
Less: Current portion of long-term bonds		(40,000)	(97,000)
Discount on current portion of long-term bonds		52	56
Discount on non-current portion of long-term bonds		(1,765)	(1,867)
Long-term bonds		₩428,235	₩388,133

(2) Long-term and short-term borrowings as of December 31, 2012 and 2011, are as follows (in millions of Korean won):

1) Short-term borrowings

Type	Lender	Annual interest rate (%)	December 31, 2012	December 31, 2011
Short-term borrowings in Korean won	Korea Exim Bank	4.93–4.96	₩-	₩25,000
Short-term borrowings in foreign currency	Korea Exim Bank	LIBOR 3M+2.7%	-	9,803
Usance (Document against acceptance and payment)	Woori Bank and others	0.70–2.70	11,375	29,030
Total			₩11,375	₩63,833

Short-term borrowings, above, include loans recognized as a result of transfer of accounts receivable, which do not satisfy requirements for derecognition of financial assets. The transferred accounts receivable is pledged as collateral for loans (see Note 31-(3)).

2) Long-term borrowings

Type	Lender	Annual interest rate (%)	December 31, 2012	December 31, 2011
Borrowings in	Hana Bank	5.55	₩-	₩50,000
Korean won	Korea Development Bank	1.00–4.89	40,326	61,633
	Shinhan Bank	4.93	40,000	40,000
	Korea Exim Bank	5.13	20,000	20,000
	Kookmin Bank	3.00	194	226
	National Agricultural Cooperative Federation	1.00-4.98	30,006	29
	Korea Housing Guarantee	1.00	2,904	2,904
	Woori Bank	5.27	50,000	-
	La-union	4.80	50,000	-
	Total		233,430	174,792
Less: Current portion			(60,457)	(21,605)
Discount on borrowings			(14)	(24)
	Net		₩172,959	₩153,163

17. RETIREMENT BENEFIT OBLIGATION:

(1) Details of retirement benefit obligation as of December 31, 2012 and 2011, are as follows (in millions of Korean won):

	December 31, 2012	December 31, 2011
Present value of defined benefit obligation	₩93,793	₩83,271
Fair value of plan assets (Note 1)	(22,898)	(25,002)
Total	₩70,895	₩58,269

(Note 1) The fair value of plan assets includes ₩159 million and ₩207 million of National Pension Fund as of December 31, 2012 and 2011, respectively.

(2) Expenses recognized in profit and loss for the years ended December 31, 2012 and 2011, are as follows (in millions of Korean won):

	Year ended December 31, 2012	Year ended December 31, 2011
Current service cost	₩15,560	₩10,786
Interest cost	4,019	3,167
Expected return on plan assets	(904)	(1,120)
Total	₩18,675	₩12,833

(3) Details of the total expense recognized in the separate statements of income for the years ended December 31, 2012 and 2011, are as follows (in millions of Korean won):

	Year ended December 31, 2012	Year ended December 31, 2011
Cost of sales	₩9,822	₩8,173
Selling and administrative expenses	8,613	4,505
Research and development cost	240	155
Total	₩18,675	₩12,833

(4) Changes in defined benefit obligations for the years ended December 31, 2012 and 2011, are as follows (in millions of Korean won):

	Year ended December 31, 2012	Year ended December 31, 2011
Beginning balance	₩83,271	₩64,844
Current service cost	15,560	10,786
Transfer in	1,775	1,122
Transfer out	(3,838)	(977)
Interest cost	4,019	3,167
Benefit paid	(18,920)	(10,742)
Actuarial loss	9,306	15,071
Business combinations	2,780	-
Business transfer	(160)	-
Ending balance	₩93,793	₩83,271

(5) Changes in plan assets for the years ended December 31, 2012 and 2011, are as follows (in millions of Korean won):

	Year ended December 31, 2012	Year ended December 31, 2011
Beginning balance	₩25,002	₩26,451
Expected return on plan assets	904	1,120
Transfer out	(424)	(389)
Benefit payment	(3,685)	(1,781)
Actuarial loss	(198)	(399)
Business combinations	1,320	-
Business transfer	(21)	-
Ending balance	₩22,898	₩25,002

Realized return on plan assets amounted to ₩706 million and ₩721 million for the years ended December 31, 2012 and 2011, respectively.

(6) Assumptions used on actuarial valuation as of December 31, 2012 and 2011, are as follows:

	December 31, 2012	December 31, 2011
Discount rate for defined benefit obligations	3.70%	5.00%
Expected rate of return on plan assets	3.70%	3.70%
Expected rate of salary increase (Note 1)	Employee 5.0–7.0% Director 5.3%	Employee 5.5–7.5% Director 8.0%

(Note 1) Assumptions of expected rate of salary increase differ by business segment.

Assumption about death is based on the statistics and experiences, and the main estimates of assumptions used on actuarial valuation are based on the report of external actuary who is professionally qualified.

(7) Details of plan assets as of December 31, 2012 and 2011, are as follows (in millions of Korean won):

	December 31, 2012	December 31, 2011
Equity instruments	₩11	₩206
Debt instruments	1,192	12,845
Others (Note 1)	21,695	11,951
Total	₩22,898	₩25,002

(Note 1) Other plan assets include demand deposits, loans receivable, commercial paper and note.

The expected rates of return on plan assets are determined considering applicable expected rate of return on plan assets under current investment policy. The expected rates of return on debt securities are based on redemption yields at end of the reporting period. The expected rates of return on equity securities and other assets reflect historical market return data by asset category.

18. PROVISIONS:

Changes in provisions for the year ended December 31, 2012, are as follows (in millions of Korean won):

	Year ended December 31, 2012						
	January 1, 2012	Accrual	Use	Others (Note 1)	December 31, 2012	Current	Non-current
Provision for product warranties	₩3,141	₩1,054	₩(1,850)	₩-	₩2,345	₩2,345	₩-
Asset retirement obligations	898	45	(29)	100	1,014	100	914
Total	₩4,039	₩1,099	₩(1,879)	₩100	₩3,359	₩2,445	₩914

(Note 1) Newly recognized amount for the year ended December 31, 2012.

The Company estimates expenditure required to settle the Company's obligations from product warranty, refund, related after service and others based on warranty period, historical claim rate and recognize provision.

19. SHARE CAPITAL AND SHARE PREMIUM:

Changes in share capital and share premium for the years ended December 31, 2012 and 2011, are as follows (in millions of Korean won and number of shares):

	Number of shares		Share capital			
	Common shares	Preferred shares	Common shares	Preferred shares	Total	Share premium
Balance at January 1, 2011	₩25,042,611	₩5,769,814	₩125,213	₩28,849	₩154,062	₩312,772
Exercising share options	46,600	-	233	-	233	3,859
Balance at December 31, 2011	₩25,089,211	₩5,769,814	₩125,446	₩28,849	₩154,295	₩316,631
Balance at January 1, 2012	₩25,089,211	₩5,769,814	₩125,446	₩28,849	₩154,295	₩316,631
Exercising share options	10,800	-	55	-	55	1,455
Retirement of shares through retained earnings	(300,000)	-	-	-	-	-
Capital reduction	(4,072,978)	(373,055)	(20,365)	(1,865)	(22,230)	-
Issuance due to Merger	131,788	-	658	-	658	15,550
Balance at December 31, 2012	₩20,858,821	₩5,396,759	₩105,794	₩26,984	₩132,778	₩333,636

The Company's number of shares authorized is 400,000,000 shares with a par value of ₩5,000 per share. The number of shares issued by the Company is 20,858,821 of common stock and 5,396,759 of preferred stock as of December 31, 2012. There is a difference arising from retirement of shares through retained earnings, capital stock amount to ₩132,778 million is not the same as total par value of shares issued amount to ₩131,278 million.

The number of shares that are having limitation on voting right under commercial law is 4,403,614 and 8,406,208 as of December 31, 2012 and 2011, respectively.

20. OTHER CAPITAL SURPLUS:

Other capital surplus as of December 31, 2012 and 2011, is summarized as follows (in millions of Korean won):

	December 31, 2012	December 31, 2011
Gain from merger	₩1,390	₩1,390
Other capital surplus	116,955	116,706
Asset revaluation reserve	277,542	277,542
Total	₩395,887	₩395,638

21. OTHER CAPITAL ITEMS:

(1) Other capital items as of December 31, 2012 and 2011, are summarized as follows (in millions of Korean won):

	December 31, 2012	December 31, 2011
Treasury stock	₩(202,676)	₩(336,536)
Loss on disposal of treasury stock	(16,738)	(16,738)
Share option	13,058	9,570
Loss on capital reduction	(127,319)	-
Total	₩(333,675)	₩(343,704)

(2) Treasury stock

The Company acquired registered common stock and non-voting preferred stock and recognized them as other capital item for the stabilization of stock price. Treasury stock will be retired or issued. Changes of treasury stock for the year ended December 31, 2012 are as follows (in millions of Korean won) :

	Number of treasury stock			Carrying amount		
Description	Common stock	Preferred stock	Total	Common stock	Preferred stock	Total
January 1, 2012	8,406,208	746,109	9,152,317	₩330,221	₩6,315	₩336,536
Acquisition (Note 1)	370,384	-	370,384	47,030	-	47,030
Retirement of shares through retained earnings (Note 2)	(300,000)	-	(300,000)	(43,236)	-	(43,236)
Capital reduction without refund (Note 3)	(4,072,978)	(373,055)	(4,446,033)	(146,391)	(3,158)	(149,549)
Merger (Note 4)	-	300,000	300,000	-	11,895	11,895
December 31, 2012	4,403,614	673,054	5,076,668	₩187,624	₩15,052	₩202,676

(Note 1) Treasury stock was acquired through KRX for the stabilization of stock price.

(Note 2) Retirement of shares through retained earnings had done as of February 14, 2012, as per the Board of Directors resolutions on October 27, 2011. Carrying amount of treasury stock and retained earnings were set off without change of capital.

(Note 3) Capital reduction had been done as of May 2, 2012, as per a resolution of general meeting of stockholders on March 30, 2012. Loss on capital reduction amounted to ₩127,319 million, which is a difference between carrying amount of treasury stock and capital stock and was recognized.

(Note 4) As per merger with DFMS on November 1, 2012, carrying amount of preferred stocks of the Company that predecessor company had were transferred to treasury stock.

(3) Share-based payment

The Company has granted share options to its directors several times. Share options are settled based on the board of directors' decision by issuance of new stock, treasury stock or cash settlement. Vesting condition offers two-year service after the resolution at the shareholders' meeting. Number of granted options as of December 31, 2012, is as follows (in millions of Korean won, except for share data).

Details	Date of grant	Number of granted options	Exercisable period	Exercisable price	Expected fair value at the date of grant
6th	2006.2.27	1,400	2009.2.27–2016.2.26	₩32,700	₩13,925
8th	2007.3.16	4,400	2010.3.16–2017.3.15	59,600	28,930
9th	2008.3.21	27,000	2011.3.21–2018.3.20	165,100	68,846
10th	2009.3.27	4,950	2012.3.27–2019.3.26	106,500	53,382
12th	2010.3.26	101,260	2013.3.26–2020.3.26	116,500	56,460
13th	2011.3.25	58,600	2014.3.25–2021.3.25	137,500	68,045
14th	2012.3.30	63,600	2015.3.30–2022.3.30	156,200	63,647
	Total	261,210			

Changes in share option for the year ended December 31, 2012, are as follows:

1) Number of common shares to be issued:

Details	Date of grant	January 1, 2012	Granted	Exercised	Forfeited	December 31, 2012
6th	2006.2.27	1,400	-	-	-	1,400
8th	2007.3.16	5,300	-	(900)	-	4,400
9th	2008.3.21	28,400	-	-	(1,400)	27,000
10th	2009.3.27	9,450	-	(4,500)	-	4,950
11th	2009.7.28	5,400	-	(5,400)	-	-
12th	2010.3.26	103,360	-	-	(2,100)	101,260
13th	2011.3.25	59,600	-	-	(1,000)	58,600
14th	2012.3.30	-	63,600	-	-	63,600
	Total	212,910	63,600	(10,800)	(4,500)	261,210

2) Valuation amount (in millions of Korean won):

Details	Date of grant	January 1, 2012	Granted	Exercised	Forfeited	December 31, 2012
6th	2006.2.27	₩19	₩-	₩-	₩-	₩19
8th	2007.3.16	153	-	(26)	-	127
9th	2008.3.21	1,956	-	-	(96)	1,860
10th	2009.3.27	505	-	(240)	-	265
11th	2009.7.28	229	-	(229)	-	-
12th	2011.3.26	5,149	692	-	(119)	5,722
13th	2012.3.25	1,559	2,005	-	(35)	3,529
14th	2012.3.30	-	1,536	-	-	1,536
	Total	₩9,570	₩4,233	₩(495)	₩(250)	₩13,058

The weighted-average price of shares on their respective exercise dates for the year ended December 31, 2012, is ₩135,373. The weighted-average remaining contractual period of share options is 8.12 years. Expense recognized related to the share option grant amounted to ₩4,233 million and ₩4,594 million for the years ended December 31, 2012 and 2011, respectively. Expense to be recognized in the future period amounted to ₩2,976 million.

The Company calculated expenses applying fair value approach. Assumptions used in determining fair value of share options are as follows:

Details	Date of grant	Risk-free interest rate (Note 1)	Expected exercisable period	Expected volatility	Expected dividend yield ratio
6th	2006.2.27	4.87%	3.00	48.21%	0%
8th	2007.3.16	4.79%	3.00	46.73%	0%
9th	2008.3.21	5.18%	3.00	58.89%	0%
10th	2009.3.27	3.71%	3.53	69.82%	22%
11th	2009.7.28	4.17%	3.27	70.11%	21%
12th	2010.3.26	3.82%	3.27	71.67%	35%
13th	2011.3.25	3.66%	3.29	73.42%	40%
14th	2012.3.30	3.57%	3.41	62.76%	43%

(Note 1) Risk-free interest rate is based on a three-year treasury bond yield rate.

22. ACCUMULATED OTHER COMPREHENSIVE INCOME:

(1) Accumulated other comprehensive income as of December 31, 2012 and 2011, is summarized as follows (in millions of Korean won):

	December 31, 2012	December 31, 2011
Unrealized gain on AFS securities	₩1,175	₩1,110
Unrealized gain (loss) on valuation of derivatives	643	(2,603)
Total	₩1,818	₩(1,493)

(2) Tax effects directly recognized in accumulated other comprehensive income as of December 31, 2012, December 31, 2011, are as follows (in millions of Korean won):

	December 31, 2012			December 31, 2011		
Description	Before tax	Tax effect	After tax	Before tax	Tax effect	After tax
Unrealized gain on AFS securities	₩1,550	₩(375)	₩1,175	₩1,464	₩(354)	₩1,110
Unrealized gain (loss) on valuation of derivatives	848	(205)	643	(3,434)	831	(2,603)
Total	₩2,398	₩(580)	₩1,818	₩(1,970)	₩477	₩(1,493)

23. RETAINED EARNINGS:

(1) Retained earnings as of December 31, 2012 and 2011, are as follows (in millions of Korean won):

	December 31, 2012	December 31, 2011
Legal reserve	₩20,652	₩14,105
Voluntary reserve	68,000	43,000
Unappropriated retained earnings	1,299,259	1,389,654
Total	₩1,387,911	₩1,446,759

The Commercial Code of the Republic of Korea requires the Company to appropriate an amount equal to a minimum of 10% of annual cash dividends declared as a legal reserve, until the reserve equals 50% of its issued share capital.

(2) Changes in retained earnings for the years ended December 31, 2012 and 2011, are as follows (in millions of Korean won):

	Year ended December 31, 2012	Year ended December 31, 2011
Beginning balance	₩1,446,759	₩1,360,910
Profit for the year	80,923	155,323
Actuarial loss recognized in retained earnings	(7,204)	(11,547)
Payment of dividends	(65,303)	(57,927)
Retirement of treasury stock through retained earnings	(43,236)	-
Dividends to owners incurred by equity spin off	(24,028)	-
Ending balance	₩1,387,911	₩1,446,759

(3) Separate statements of appropriation of retained earnings for the years ended December 31, 2012 and 2011, are as follows (in Korean won):

	2012		2011	
UNAPPROPRIATED RETAINED EARNINGS		₩1,299,259,297,884		₩1,389,653,959,899
Unappropriated retained earnings carried over from the prior year	1,303,636,144,839		1,256,871,817,238	
Interim dividend	(10,831,230,000)		(10,994,036,500)	
Net income	80,922,579,358		155,323,331,822	
Actuarial loss on defined benefit obligations	(7,203,844,853)		(11,547,152,661)	
Retirement of treasury stock through retained earning	(43,235,732,410)		-	
Dividends to owners incurred by equity spin off	(24,028,619,050)		-	
TRANSFER FROM VOLUNTARY RESERVES		8,284,000,000		-
Reserve for research and human resource	8,284,000,000		-	
APPROPRIATIONS:		91,191,897,010		86,017,815,060
Legal reserve	7,456,647,910		6,546,531,960	
Cash dividends	63,735,249,100		54,471,283,100	
Reserve for research and human resource	20,000,000,000		25,000,000,000	
UNAPPROPRIATED RETAINED EARNINGS TO BE CARRIED FORWARD TO SUBSEQUENT YEAR		₩1,216,351,400,874		₩1,303,636,144,839

(4) The amount of dividends and dividends per share for the years ended December 31, 2012 and 2011, are as follows:

1) Interim dividends (in Korean won and number of shares)

Description	2012			2011		
Number of shares eligible for dividends	Preferred share (old)	Preferred share (new)	Common share	Preferred share (old)	Preferred share (new)	Common share
Face value per share	₩5,000	₩5,000	₩5,000	₩5,000	₩5,000	₩5,000
Dividend rate	10%	10%	10%	10%	10%	10%
Dividend amount (in millions of Korean won)	₩2,045	₩467	₩8,319	₩2,045	₩467	₩8,482

2) Year-end dividends (in Korean won and number of shares)

Description	2012			2011		
Shares eligible for dividends	Preferred share (old)	Preferred share (new)	Common share	Preferred share (old)	Preferred share (new)	Common share
Face value per share	₩5,000	₩5,000	₩5,000	₩5,000	₩5,000	₩5,000
Dividend rate	61%	60%	60%	51%	50%	50%
Dividend amount (in millions of Korean won)	₩11,560	₩2,800	₩49,375	₩10,430	₩2,334	₩41,707

Dividend for the year 2012 will be paid in April 2013 and the dividend for the year 2012 was paid in April 2013.

3) Dividend payout ratio and dividend yield ratio

Description	2012			2011		
Shares eligible for dividends	Preferred shares (old)	Preferred shares (new)	Common share	Preferred shares (old)	Preferred shares (new)	Common share
Dividend payout ratio	16.81%	4.04%	71.29%	8.03%	1.80%	32.31%
Dividend yield ratio	9.44%	9.41%	2.71%	8.73%	8.33%	2.10%

24. REVENUES:

Details of revenues for the years ended December 31, 2012 and 2011, are as follows (in millions of Korean won):

	Year ended December 31, 2012	Year ended December 31, 2011
1. Sales of goods		
-Manufactured products	₩1,048,647	₩1,240,468
-Merchandise	110,213	174,786
2. Others		
-Dividend	47,669	69,840
-Others (Note 1)	634,552	445,002
Total	₩1,841,081	₩1,930,096

(Note 1) Service revenues generated in system maintenance services, transport forwarding services and real estate rental services

25. EXPENSES CLASSIFIED BY NATURE:

Expenses classified by nature for the years ended December 31, 2012 and 2011, are as follows (in millions of Korean won):

	Year ended December 31, 2012	Year ended December 31, 2011
Employee benefits	₩256,341	₩219,223
Depreciation and amortization	48,129	37,658
Total	₩304,470	₩256,881

26. SELLING AND ADMINISTRATIVE EXPENSES:

Selling and administrative expenses for the years ended December 31, 2012 and 2011, are as follows (in millions of Korean won):

	Year ended December 31, 2012	Year ended December 31, 2011
Salaries	₩71,306	₩70,904
Bonuses	20,686	22,623
Provision for retirement and severance benefits	8,613	4,505
Share-based payment	4,179	4,495
Employee welfare	17,291	13,750
Travel	7,832	6,541
Communications	1,144	1,561
Utilities	920	607
Sales commission	1,824	1,380
Printing	330	693
Office expense	1,462	1,088
Miscellaneous administrative	510	309
Taxes and dues	3,354	2,139
Rent	13,311	11,999
Leases	146	146
Depreciation	5,168	4,735
Repairs and maintenance	1,120	1,295
Insurance	641	631
Entertainment	3,974	4,200
Advertising	3,159	2,377
Automobile maintenance	1,074	1,133
Packaging	967	2,597
Research and development	17,577	19,009
Education and training	18,855	11,921
Freight and custody	10,298	11,025
Service fees	33,717	33,107
Maintenance on office	4,860	4,471
Outsourcing fee	9,900	10,236
Sample	1,443	1,004
Bad debt expense	(821)	750
Amortization	3,462	2,603
Maintenance of overseas branch	305	935
Total	₩268,607	₩254,769

27. FINANCE INCOME AND EXPENSES:

Finance income and expenses for the years ended December 31, 2012 and 2011, are summarized as follows (in millions of Korean won):

	Year ended December 31, 2012	Year ended December 31, 2011
Finance income:		
Interest income		
-Cash and cash equivalents	₩4,323	₩4,752
-Long-term and short-term financial instruments	521	282
-Accounts receivable and other	139	1,481
-Held-to-maturity investments	439	20
Subtotal	5,422	6,535
Dividend income		
- AFS securities	3	5
Gain on foreign currency transaction	11,386	16,918
Gain on foreign currency translation	2,012	6,673
Gain on derivative transaction	980	3,558
Gain on valuation of derivatives	6	-
Income on financial guarantee	227	110
Total	20,036	33,799
Finance expenses:		
Interest expenses		
-Long-term and short-term borrowings	13,891	10,960
-Bonds	21,600	21,676
-Financial lease debt	859	392
-Others	45	43
Subtotal	36,395	33,071
Loss on foreign currency transaction	14,188	18,681
Loss on foreign currency translation	2,562	5,048
Loss on derivative transactions	47	1,294
Loss on valuation of derivatives	167	191
Loss on retirement of bonds	80	71
Total	53,439	58,356
Net financial expense	₩33,403	₩24,557

28. OTHER NON-OPERATING INCOME AND EXPENSES:

(1) Other non-operating income and expenses for the years ended December 31, 2012 and 2011, consist of the following (in millions of Korean won):

	Year ended December 31, 2012	Year ended December 31, 2011
Other non-operating income:		
Gain on disposal of investments in associates	₩1,397	₩-
Gain on disposal of investments	-	46
Gain on disposal of property, plant and equipment	484	97
Gain on disposal of intangible assets	101	356
Gain on disposal of investment property	-	824
Gain on business transfer	3,686	-
Gain on litigation	-	6,387
Others	5,127	6,702
Subtotal	10,795	14,412
Other non-operating expenses:		
Other bad debt expense	₩(46)	₩675
Impairment loss of investments in associates	-	94
Loss on disposal of long-term investment securities	282	-
Loss on disposal of property, plant and equipment	1,676	548
Loss on disposal of intangible assets	14	4
Impairment loss of intangible assets	1,593	213
Impairment loss of investment property	-	4,448
Impairment loss of investments	-	28
Donations	7,194	6,167
Depreciation expenses on assets not in use	8	31
Others	2,180	1,060
Subtotal	12,901	13,268
Total	₩(2,106)	₩1,144

29. INCOME TAX EXPENSE:

(1) Components of income tax expense for the years ended December 31, 2012 and 2011, are as follows (in millions of Korean won):

	Year ended December 31, 2012	Year ended December 31, 2011
Current income tax expense	₩21,061	₩7,881
Deferred income tax	4,354	2,637
Transferred deferred income tax due to merger	563	-
Total income tax expense	25,978	10,518
Deferred income tax directly charged to equity	1,243	4,837
Income tax expense	₩27,221	₩15,355

(2) Changes in deferred tax assets and liabilities for the years ended December 31, 2012 and 2011, are as follows (in millions of Korean won):

		Changes		
	January 1, 2012	Income (Expense)	Equity	December 31, 2012
Accrued revenues	₩(177)	₩117	₩-	₩(60)
Allowance for inventories	2,643	(1,215)	-	1,428
AFS securities	5,554	770	(21)	6,303
Investment in associates	(19,917)	(572)	-	(20,489)
Property, plant and equipment	(38,570)	(527)	-	(39,097)
Accrued expenses	12,137	(1,753)	-	10,384
Retirement benefit obligation	12,063	742	2,300	15,105
Reserve for research and human resource	(18,114)	(2,835)	-	(20,949)
Others	8,642	(324)	(1,036)	7,282
Total	₩(35,739)	₩(5,597)	₩1,243	₩(40,093)

	January 1, 2011	Changes: Income (Expense)	Changes: Equity	December 31, 2011
Accrued revenues	₩(171)	₩(6)	₩-	₩(177)
Allowance for inventories	1,469	1,174	-	2,643
AFS securities	5,124	537	(107)	5,554
Investment in associates	(19,974)	57	-	(19,917)
Property, plant and equipment	(36,695)	(1,875)	-	(38,570)
Accrued expenses	11,343	794	-	12,137
Retirement benefit obligation	7,119	1,021	3,923	12,063
Reserve for research and human resource	(10,967)	(7,147)	-	(18,114)
Others	9,650	(2,029)	1,021	8,642
Total	₩(33,102)	₩(7,474)	₩4,837	₩(35,739)

The Company offsets deferred tax assets and deferred tax liabilities, if the Company has a legally enforceable right to set off current tax assets against current tax liabilities and the deferred tax assets against deferred tax liabilities relating to income taxes levied by the same taxation authority.

(3) Temporary differences, net loss and tax credit carryforwards, which have not been recognized as deferred income tax assets and expired, unused as of December 31, 2012 and 2011, are nil.

The probability of realizing deferred tax assets depends on the Company's ability to generate taxable income in future years, economic situation and industry forecast. The Company periodically reviews these matters.

(4) Temporary differences from associated investments in subsidiaries, which are not recognized as deferred tax assets, are as follows (in millions of Korean won):

	December 31, 2012	December 31, 2011
Subsidiaries	₩74,879	₩68,156
Associated company	(2,001)	(2,001)
Total	₩72,878	₩66,155

(5) Tax effects directly recognized in equity as of December 31, 2012 and 2011, are as follows (in millions of Korean won):

	December 31, 2012			December 31, 2011		
Description	Before tax	Deferred income tax assets (liabilities)	After tax	Before tax	Deferred income tax assets(liabilities)	After tax
Unrealized gain on AFS securities	₩1,550	₩(375)	₩1,175	₩1,464	₩(354)	₩1,110
Unrealized gain (loss) on valuation of derivatives	848	(205)	643	(3,434)	831	(2,603)
Revaluation reserve	22,139	(4,870)	17,269	22,139	(4,870)	17,269
Actuarial gain or loss	(33,125)	8,016	(25,109)	(23,622)	5,716	(17,906)
Total	₩(8,588)	₩2,566	₩(6,022)	₩(3,453)	₩1,323	(₩2,130)

(6) A reconciliation of income tax expense and accounting income before income tax expense for the years ended December 31, 2012 and 2011, is as follows (in millions of Korean won):

	Year ended December 31, 2012	Year ended December 31, 2011
Profit before income tax	₩108,143	₩170,678
Income tax expense at statutory income tax rate	25,709	41,274
Adjustment:		
Non-temporary difference	(8,681)	(17,635)
Temporary difference not recognized as deferred income tax	1,627	2
Tax credits	(4,233)	(5,155)
Effect of tax rate change	-	2,890
Additional income tax and tax refund for prior periods	11,554	(10,871)
Others	1,245	4,850
Income tax expense	₩27,221	₩15,355
Effective tax rate	25.17%	9.00%

30. EARNINGS (LOSS) PER SHARE:

Earnings per share for the years ended December 31, 2012 and 2011, are computed as follows (in millions of Korean won, except for share data).

(1) Basic earnings (loss) per share

Basic earnings (loss) per share are computed by dividing profit or dividing net income attributable to owners of the parent company by the weighted-average number of common shares outstanding during the period excluding treasury shares.

	Year ended December 31, 2012	Year ended December 31, 2011
Net income	₩80,922,579,358	₩155,323,331,822
(-) Dividends for preferred share	18,792,425,180	34,937,249,904
Net income (loss) available to common share	62,130,154,178	120,386,081,918
Weighted-average number of common shares outstanding (Note 1)	16,625,166	17,412,511
Basic net income (loss) per share	₩3,737	₩6,914

(Note 1) The weighted-average number of common shares outstanding used in basic earnings (loss) per share calculation is as follows:

	2012	2011
Beginning outstanding shares	16,683,003	18,340,721
Effect of share option exercised	4,277	36,225
Issuance of share capital	21,965	-
Acquired treasury stock (Note 2)	(84,079)	(964,435)
Weighted-average number of common shares outstanding	16,625,166	17,412,511

(Note 2) Acquired treasury stock was calculated by weighted average of change of treasury stock incurred by acquisition, retirement of shares through retained earnings, capital reduction without refund and etc., for the years ended December 31, 2012 and 2011.

(2) Diluted earnings per share

Diluted earnings per share are calculated on the basis of the weighted-average number of common and diluted potential common shares outstanding. The denominator of the diluted net income per share is adjusted to include the number of share options that have a dilutive effect as if they were issued at the beginning of the year.

	Year ended December 31, 2012	Year ended December 31, 2011
Controlling interest in net income	₩62,130,154,178	₩120,386,081,918
Share-based compensation cost	-	-
Adjusted net income available to common shares	62,130,154,178	120,386,081,918
Adjusted weighted-average number of common shares outstanding	16,632,299	17,445,110
Diluted net income per share	₩3,736	₩6,901

The adjusted weighted-average number of common shares outstanding used in the diluted earnings (loss) per share calculation is as follows:

	2012	2011
Weighted-average number of common shares outstanding	16,625,166	17,412,511
Effect of share option exercise	7,133	32,599
Adjusted weighted-average number of common shares outstanding	16,632,299	17,445,110

For the year ended December 31, 2012, share option grants 6th 8th, 10th and 11th were included from the diluted earnings per share as they have dilutive effect during the period, and share option grants 9th, 12th, 13th and 14th were excluded from the diluted earnings per share calculation as they have an antidilutive effect during the period.

Share options that excluded from the diluted earnings per share calculation as they have an antidilutive effect during 2012 and 2011 are as follows:

	2012	2011
Share options	250,460	206,210

31. COMMITMENTS AND CONTINGENCIES:

(1) Company pledged two blank notes to Korea Housing Guarantee Co., Ltd. and Korea Defense Industry Association as collateral for long-term borrowings and performance guarantee agreements.

(2) As of December 31, 2012, the Company has entered into bank overdraft agreements amounting ₩24,600 million with various financial institutions including SC First Bank.

(3) Outstanding trade receivables sold with recourse by the Company are in the amount of ₩10,885 million and ₩27,722 million as of December 31, 2012 and 2011, respectively. Because the Company retains some level of risks and rewards relating to trade receivables, the Company has recognized carrying amount of it and cash receipt from transfer as borrowings in statement of financial position (see Note 16-(2)-1)).

(4) The Company is involved in lawsuits as a defendant with claims exposure of ₩6,031 million as of December 31, 2012. The ultimate outcome of the lawsuit cannot presently be determined. Details of major lawsuits are as follows (in millions of Korean won):

Court	Claim	Plaintiff	Defendant	Claimed amount	Status
Seoul High Court	Claims for damages	Bukwang Co., Ltd. and Jeil Farming Co., Ltd.	The Company	₩526	Appeal, plaintiff has lost a case at first instance.
Seoul Central District Court	Request of manpower aid	Dae seung frontier Co., Ltd.	The Company	1,000	Setting a date to plead a case after a mediation
Seoul Central District Court	Request of contract accountant	Lee, Man Ho	The Company and Lee, Seung Jun	316	-
Changwon District Court	Wage claim	Kang, Gil su and other 97 people (Korean Metal Worker's Union)	The Company	1,082	Setting a date to plead a case
Seoul Central District Court	Return of unjust enrichment	Kim, Jong Ho	The Company	200	Setting a date to plead a case
Seoul Central District Court	Demand for payment	Korea Book Promotion Co., Ltd.	The Company and Lee Seung Jun	650	-
Seoul Central District Court	Claim for damages	Galaxia Communications Co., Ltd.	The Company and Lee Seung Jun	1,875	-
Gwangju District Court	Refund of price of purchase and sale	Kukje nonferrous metal	World Scraps and The Company	355	Setting a date to plead a case

(5) The Company has technical license agreements for the purpose of manufacturing specific products with Nabtesco, Horstman and other and for the year ended December 31, 2012, the Company paid ₩1,034 million as license fee.

(6) As of December 31, 2012, guarantees provided by the Company for third parties or received from third parties are as follows (in thousands of foreign currency and millions of Korean won):

Description	Provider	Provided to	Guarantee
Guarantees provided by the Company	The Company	Doosan Shanghai Chemical Limited	USD 1,000
		Doosan Hong Kong Limited.	USD 3,000
		Doosan Electro-Materials (Changshu) Co., Ltd.	USD 55,000
		SRS Korea	₩861
		Subtotal	861 USD 59,000
Guarantees received from financial institutions	Seoul Guarantee Insurance	The Company	3,876
	Korea Defense Industry Association and others		44,152
	Woori Bank, Korea Exchange Bank and Shinhan Bank		USD 9,503
	Korea Development Bank and others		USD 18,792
		Subtotal	₩48,028 USD 28,295

Meanwhile, the Company has responsibility of joint liability guarantee with Neoholdings Co., Ltd., which is a spin-off company for existing liabilities prior to spin-off.

32. PLEDGED ASSETS:

The Company pledged certain assets as collateral for its long-term and short-term borrowings as of December 31, 2012, as follows (in thousands of foreign currency and millions of Korean won):

Institution	Asset	Borrowings	Collateralized value
Kookmin Bank	Chang-won employee apartment	₩194	₩605
Korea Development Bank	Jeung-pyeong, Ik-san plant and Chang-won plant	40,326 USD 273	217,490 USD 32,793
Woori Bank	Shin-gal plant	USD 4,027 EUR 304	5,000
Hana Bank	Gun-po plant	USD 937 EUR 96	26,000
Korea Housing Guarantee Co., Ltd.	Securities of Korea Housing Guarantee Co., Ltd.	2,904	464
HP Financial Service and others	Financial lease asset	25,261	24,877

33. RELATED-PARTY TRANSACTIONS:

Related-party disclosures for the 2012 and 2011 are as follows.

(1) Nature of relationship

Relationship with the Company	Company name
Subsidiaries	Oricom Inc., Neovalue Co., Ltd., Doosan Advertisement (China) Co., Ltd., SRS Korea Co., Ltd., Doosan Bears Inc., Doosan Feed & Livestock Co., Ltd., Doosan Tower Co., Ltd., Doosan Dong-A Co., Ltd., DIP Holdings Co., Ltd., Doosan DST Co., Ltd., N Shaper Corp., Doosan Electro-Materials Singapore Pte Ltd., Doosan Hongkong Ltd., Doosan Electro-Materials(SHEN ZHEN) Limited, Doosan Shanghai Chemical Limited, Doosan Electro-Materials(Changshu) Co., Ltd., Doosan Real Estate ABS (1st), Doosan Real Estate ABS (2nd), Doosan Real Estate ABS (3rd), Doosan Information and Communications America, LLC, Doosan Information and Communications China, LLC, Doosan Mottrol (Jiangyin) Co., Ltd., Doosan Industrial Vehicle Co., Ltd., Doosan Industrial Vehicle Europe N.A., Doosan Industrial Vehicle U.K., Doosan Logistics Europe, Doosan Industrial Vehicle America Corp., Doosan Industrial Vehicle Yantai Co., Ltd. Doosan Equipment Rental Vietnam Company Limited., Doosan Electro-Materials America, LLC.
Associates	Doosan Heavy Industries Construction Co., Ltd., Guang Dong Xingpu Steel Center, Doosan Eco Biznet, MVP Capital Co.
Other related parties	Doosan Heavy Industries Construction Co., Ltd.'s subsidiaries, Doosan Infracore Co., Ltd. and subsidiaries, Doosan Capital Co., Ltd. and subsidiaries, Doosan Engine Co., Ltd. and subsidiaries, Doosan Credit Union, Yeongang Foundation, Trance Route Doosan Co., Ltd., Neo Trans, HANJUNG POWER Limited, Doosan Infracore Xinjiang Machinery Co., Ltd., Sichuan Kelun-Doosan Biotechnology Company Limited.

(2) Significant transactions for the years ended December 31, 2012 and 2011, between the Company and related parties are as follows (in millions of Korean won):

	Year ended December 31, 2012		Year ended December 31, 2011	
Description	Sales and others	Purchases and others	Sales and others	Purchases and others
Subsidiaries	₩159,321	₩24,952	₩213,425	₩14,647
Associates	261,517	2,617	157,354	5,112
Other related parties	449,488	14,992	442,011	29,514
Total	₩870,326	₩42,561	₩812,790	₩49,273

(3) As of December 31, 2012 and 2011, significant balances related to the transactions between the Company and related parties are as follows (in millions of Korean won):

Description	December 31, 2012		December 31, 2011	
	Receivables	Payables	Receivables	Payables
Subsidiaries	₩50,378	₩19,413	₩77,323	₩11,527
Associates	46,776	409	38,179	1,518
Other related parties	114,067	1,438	136,052	1,877
Total	₩211,221	₩21,260	₩251,554	₩14,922

(4) The Company defines key management personnel as registered officer and non-registered officer (including outside director) who have the authority and responsibility for planning, operation and control and are in charge of business or division unit. Compensation to key management personnel of the Company for the years ended December 31, 2012 and 2011, is as follows (in millions of Korean won):

Description	Year ended December 31, 2012	Year ended December 31, 2011
Short-term employee benefits	₩39,027	₩45,539
Severance benefits	2,544	1,199
Share-based payments	4,233	4,595
Total	₩45,804	₩51,333

The Company provided guarantee to related parties as of December 31, 2012 (see Note 31).

34. SEPARATE STATEMENTS OF CASH FLOWS:

(1) The adjustments and changes in operating assets and liabilities in the separate statements of cash flows for the years ended December 31, 2012 and 2011, are as follows (in millions of Korean won):

	Year ended December 31, 2012	Year ended December 31, 2011
Adjustments:		
Expenses not involving cash payments and others:	₩145,623	₩124,856
Interest expense	36,395	33,071
Income tax expense	27,221	15,355
Foreign currency translation loss	2,562	5,048
Loss on valuation of derivatives	167	191
Loss on impairment of investment in associate	-	94
Loss on disposal of long-term investment securities	282	-
Depreciation	43,966	34,369
Amortization	4,163	3,289
Loss on disposal of property, plant and equipment	1,676	548
Loss on disposal of intangible assets	14	4
Impairment of intangible assets	1,593	213
Loss on impairment of investment property	-	4,448
Loss on impairment of investment assets	-	28
Severance indemnities	18,675	12,833
Bad debt expense	(821)	750
Other bad debt expense	(46)	675
Loss on valuation of inventories	-	4,414
Loss on disposal of inventories	4,076	2,272
Contribution to provision for product warranties	1,054	2,589
Share-based payment	4,233	4,594
Loss on retirement of bonds	80	71
Donation in kind	333	-
Income not involving cash receipts and others:	(63,316)	(84,376)
Interest income	5,422	6,535
Dividend income	47,672	69,845
Foreign currency translation gain	2,012	6,673
Gain on valuation of derivatives	6	-
Gain on disposal of property, plant and equipment	484	97
Gain on disposal of intangible asset	101	356
Gain on disposal of investment property	-	824
Gain on disposal of investment asset	-	46
Recovery of impairment of inventory	2,536	-
Gain on business transfer	3,686	-
Gain on disposal of investments in associates	1,397	-
Total	₩82,307	₩40,480

	Year ended December 31, 2012	Year ended December 31, 2011
Changes in operating assets and liabilities:		
Increase in trade notes and accounts receivable	₩84,478	₩(35,523)
Decrease in other receivables	14,386	26,356
Decrease (increase) in inventories	21,803	(13,891)
Increase in other assets	1,801	(8,958)
Increase (decrease) in trade notes and accounts payable	(35,764)	(3,310)
Decrease in other payables	(10,548)	(873)
Decrease in provisions	(1,779)	(2,010)
Increase in other liabilities	(1,071)	(58)
Payment of severance benefits	(18,920)	(10,742)
Accrued severance benefits transferred from affiliated companies	(2,063)	145
Decrease (increase) in plan assets	4,109	2,170
Total	₩(56,432)	₩(46,694)

(2) Significant non-cash transactions for the years ended December 31, 2012 and 2011, are as follows :

	Year ended December 31, 2012	Year ended December 31, 2011
Reclassification of property, plant and equipment to investment property	₩69,283	₩-
Reclassification of construction in progress to buildings, machinery and others	38,762	36,273
Reclassification of bonds	40,000	97,000
Reclassification of long-term debts	60,457	21,605
Retirement of shares through retained earnings	43,236	-
Capital reduction	22,230	-
Dividends to owners incurred by equity spin-off	24,028	-
Total	₩297,996	₩154,878

(3) The Company reported on a net basis cash receipts and payments arising from transactions occurring frequently and short-term financial instruments, loans and borrowings.

35. SMALL-SCALE MERGER:

(1) The Company merged with DFMS Company to enhance the competitiveness and the corporate value follows (in millions of Korean won):

Details	Contents
Principal activity	Facility management and maintenance service
Date of acquisition	November 1, 2012
Purchase price	₩16,210
Shares acquired	100%
Merger accounting method	Acquisition

(2) Merger consideration

The stock price per share for the Company and DFMS was estimated at ₩126,500 (face value: ₩5,000) and ₩11,533 (face value: ₩500), respectively. Based upon which, the Company issued 0.0911668 shares of its common stock for each share of DFMS.

As a result, the merger consideration is ₩16,210 million by issuing the 131,788 new shares of the transferee corporation (closing price of ₩123,000 on merger day).

(3) Fair values of assets and liabilities at acquisition date from business combinations are as follows (in millions of Korean won):

	DFMS
	November 1, 2012
Current assets	₩8,145
Non-current assets	
Property, plant and equipment	2,095
Other non-current assets	13,177
Subtotal	15,272
Fair value of assets acquired	₩23,417
Current liabilities	₩12,865
Non-current liabilities	2,163
Fair value of liabilities acquired	₩15,028
Share capital	₩659
Capital surplus	7,550
Fair value of net assets acquired	₩8,209

(4) Goodwill in business combinations for the year ended December 31, 2012, is as follows (in millions of Korean won):

Purchase price	Less: fair value of the identifiable net assets acquired	Less: customer relationships(Other intangible assets)	Less: backlog of orders (other intangible assets)	Goodwill
₩16,210	₩8,209	₩1,166	₩415	₩6,420

(5) Net cash flows in business combinations for the year ended December 31, 2012, are as follows (in millions of Korean won):

Consideration paid in cash	Cash of merged company	Net cash flows
₩-	₩196	₩196

(6) Details of income in business combinations after acquisition date, are as follows (in millions of Korean won):

Sales	Net income
₩6,650	₩247

36. SPIN-OFF:

(1) The Company spun off investment division of Neoplux Co., Ltd., to Neo Holdings Co., Ltd., on December 28, 2012. Details of the spin-off are summarized as follows:

Details	Contents
Spin-off method	Capital reduction without refund
Remaining spin-off company	Doosan corporation(parent company)
New spin-off company	Neo Holdings Co., Ltd.
Spin-off date	December 28, 2012
Accounting method	K-IFRS Interpretations 2117 *Distributions of Non-cash Assets to Owners*

(2) The assets and liabilities transferred to the new spin-off company are summarized as follows (in millions of Korean won):

Details	
Assets:	
Cash and cash equivalents	₩3,000
Investments in subsidiaries	26,810
Total	29,810
Liabilities:	
Short-term borrowings	1,000
Total	₩28,810

In addition, net cash outflow of ₩3,000 million incurred by spin-off.

(3) Accounting method of spin-off is as follows (in millions of Korean won):

Debit		Credit	
Retained earnings (Note 1)	₩24,028	Net assets of spin-off	₩28,810
Investments in associates	6,179	Gain on disposal of investments in associates	1,397

(Note 1) Retained earnings measured fair value of non-cash assets transferred.

In addition, income from the investment division of Neoplux Co., Ltd., is not classified as discontinued operations due to the proportion it accounted for in operating income of the Company is not material.

37. BUSINESS TRANSFER:

(1) The Company transferred the Glonet food business Division. Details of business transfer are summarized as follows(In millions of Korean won) :

Description	Contents
Principal activity	Imports and sales of food materials
Transfer of business date	February 10, 2012
Transfer method	Divisional business transfer
Purchased company	SRS Korea Co., Ltd.(Subsidiary of the Company)
Price of net assets transferred	₩6,166 (Cash)

(2) Details of gain on transfer of business are as follows (in millions of Korean won):

Description	Price of net asset transferred	Value of assets transferred	Value of liabilities transferred	Gain on transfer of business
Amount	₩6,166	₩4,690	₩2,210	₩3,686

In addition, net cash inflow of 6,166 million has occurred by business transfer.

Internal Accounting Control System ("IACS") Review Report

English Translation of a Report Originally Issued in Korean

To the Representative Director of
Doosan Corporation:

We have reviewed the accompanying Report on the Management's Assessment of IACS (the "Management's Report") of Doosan Corporation (the "Company") as of December 31, 2012. The Management's Report, and the design and operation of IACS are the responsibility of the Company's management. Our responsibility is to review the Management's Report and issue a review report based on our procedures. The Company's management stated in the accompanying Management's Report that "based on the assessment of the IACS as of December 31, 2012, the Company's IACS has been appropriately designed and is operating effectively as of December 31, 2012, in all material respects, in accordance with the IACS framework established by the Korea Listed Companies Association."

We conducted our review in accordance with the IACS Review Standards established by the Korean Institute of Certified Public Accountants. Those standards require that we plan and perform a review, objective of which is to obtain a lower level of assurance than an audit, of the Management's Report in all material respects. A review includes obtaining an understanding of a company's IACS and making inquiries regarding the Management's Report and, when deemed necessary, performing a limited inspection of underlying documents and other limited procedures.

The Company's IACS represents internal accounting policies and a system to manage and operate such policies to provide reasonable assurance regarding the reliability of financial statements prepared, in accordance with Korean International Financial Reporting Standards, for the purpose of preparing and disclosing reliable accounting information. Because of its inherent limitations, IACS may not prevent or detect a material misstatement of the financial statements. Also, projections of any evaluation of effectiveness of IACS to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

Based on our review, nothing has come to our attention that causes us to believe that the Management's Report referred to above is not fairly stated, in all material respects, in accordance with the IACS Framework established by the Korea Listed Companies Association.

Our review is based on the Company's IACS as of December 31, 2012, and we did not review its IACS subsequent to December 31, 2012. This report has been prepared pursuant to the Acts on External Audit for Stock Companies in the Republic of Korea and may not be appropriate for other purposes or for other users.

Deloitte Anjin LLC.

March 14, 2013

Report on the Assessment of Internal Accounting control System ("IACS")

To the Board of Directors and auditor (Audit Committee) of Doosan Corporation

I. As the Internal Accounting Control Officer("IACO") of Doosan Corporation ("the Company"), assessed the status of the design and operation of the Company's IACS for the year ended December 31, 2012.

The Company's management including IACO is responsible for designing and operating IACS.

I. As the IACO, assessed whether the IACS has been appropriately designed and is effectively operating to prevent and detect any error or fraud which may cause any misstatement of the financial statements, for the purpose of preparing and disclosing reliable financial statement.

I. As the IACO, applied the IACS Framework established by KOREA Listed Companies Association for the assessment of design and operation of the IACS.

Based on assessment of the IACS, the Company's IACS has been appropriately designed and is operating effectively as of December 31, 2012, in all material respect, in accordance with the IACS Framework.

March, 04 , 2013

Internal Accounting control officer Park Wan Seok

Chief Executive Officer *Lee jae Kyung*