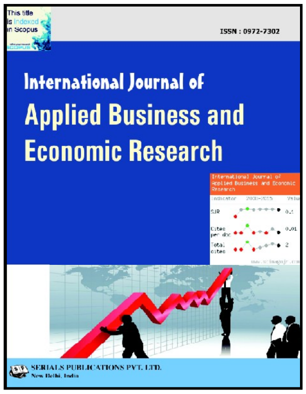

International Journal of Applied Business and Economic Research

ISSN : 0972-7302

available at http: www.serialsjournal.com

Volume 15 • Number 10 • 2017

World Shipbuilding Industry and Export Credit Insurances for Ship Exports: Focusing Korea's Export Credit Insurances

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Abstract: The total volume of world new ship orders for the last two decades (1997-2016) amounted to 701,073 thousand CGT, and Korea's new ship orders was 234,132 thousand CGT during the same period, 33.4% of the total volume of world new ship orders followed by China (25.2%) and Japan (21.6%). In 2016, the volume of world new ship orders considerably dropped to 11,150 thousand CGT, the lowest for the last two decades.

Officially supported export credit insurance began in 1919 by the Export Credit Guarantee Department of the United Kingdom to support exports. Export credit insurances have been operated, in many countries, by the government or by the public body.

This paper analyses the world shipbuilding industry for the last two decades to find out the economic trends and the shipbuilding competitiveness of Asian three countries (Korea, China, and Japan), and also reviews Korea's ship exports. This paper overviews the roles of export credit insurances as official export supports, and reviews the operations of two specific export credit insurances (medium and long term export credit insurance, export bond insurance) in support of ship exports. This paper analyses the co-relation of ship exports and export credit insurances to find the support effects.

Key Words: shipbuilding industry, export credit insurance, export credit, export, international trade

1. INTRODUCTION

The total volume of world new ship orders for the last two decades (1997-2016) amounted to 701,073 thousand CGT (compensated gross tonnage). The total volume of world new ship orders in 2007 was 87,288 thousand CGT, the highest for the last decades, but it was only 11,150 thousand CGT in 2016, the lowest for the last two decades. Republic of Korea ("Korea")'s new ship orders was 234,132 thousand

CGT during the same period, 33.4% of the total volume of world new ship orders followed by China (176,631 thousand CGT, 25.2%) and Japan (151,176 thousand CGT, 21.6%).[1] Korea ranked first in the total volume of world new ship orders by CGT for the last two decades, and has ranked among the top three nations in shipbuilding industry without exception for the last two decades.

Korea's big three ship yards, Hyundai Heavy Industries Co., Ltd. ("Hyundai"), Daewoo Shipbuilding & Marine Engineering Co., Ltd. ("Daewoo"), and Samsung Heavy Industries Co., Ltd. ("Samsung"), have been among world top five for the same period. Although such a remarkable result was mainly owing to Korean ship-building industry's competitiveness, Korea's export credit insurance programmes have also contributed to the growth of Korea's shipbuilding industry.

Export credit insurance (also called as "export insurance") is a sort of export credit. Export credit supports were initially introduced to support exports.[2]An institution operating export credit programmes is called an export credit agency ("ECA")[3], and export credit operated by an ECA on government account is called "officially supported export credit"[4], and those ECAs are called "official export credit agencies".[5] Officially supported export credits began in 1919 by the Export Credit Guarantee Department (the "ECGD")[6] of the United Kingdom[7], and the International Union of Credit & Investment Insurers (the "Berne Union") was formed in 1934.[8]Whilst official export credit support promotes national exports[9],they have brought the concern that theymay distort the fair competition in international trades.[10]

In Korea, export credit insurance programmes are operated by the Korea Trade Insurance Corporation (the "K-Sure") under the Trade Insurance Act. The K-sure is classified as an official export credit agency[11] because it is wholly owned by the Korea Government and the export credit insurance programmes are, in reality, operated on government account.[12] Thus, the export credit insurance programmes provided by the K-Sure fall in officially supported export credits.[13]

2. WORLD SHIPBUILDING INDUSTRY AND KOREA'S SHIP EXPORTS

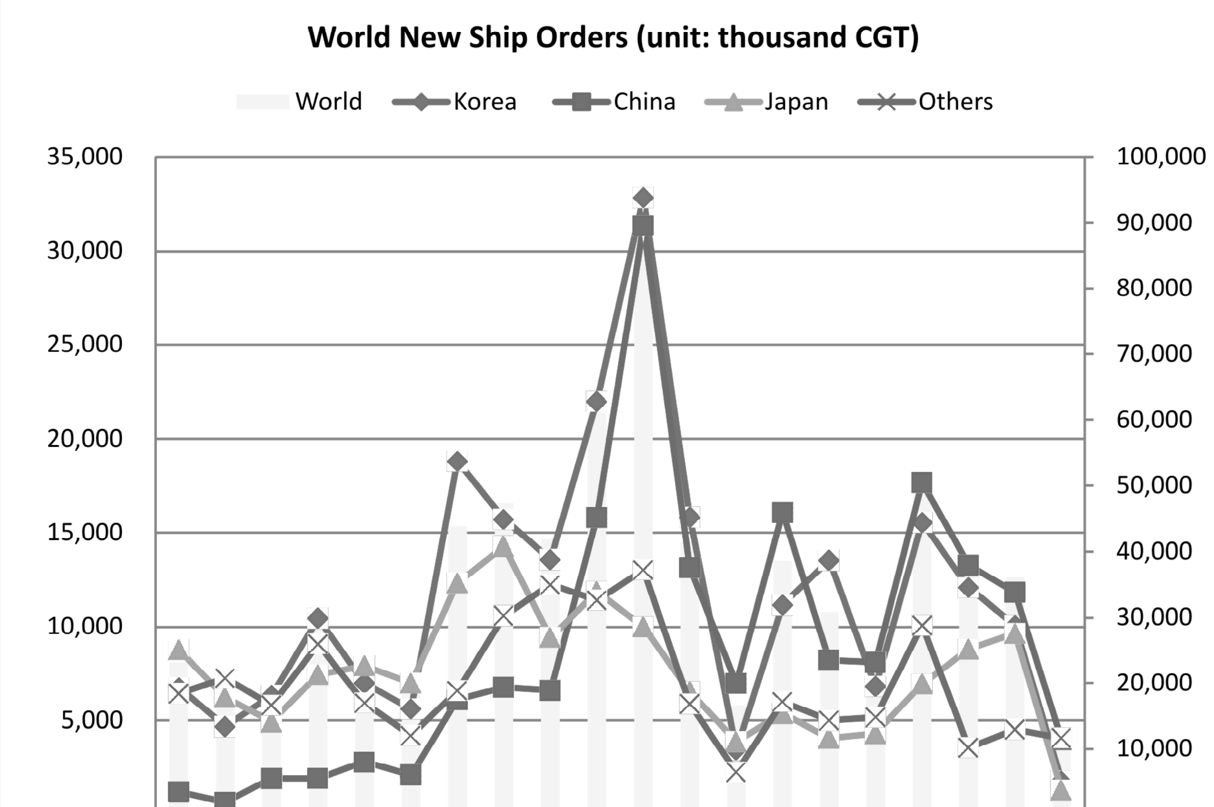
The total volume of world new ship order for the last two decades (1997-2016) amounted to 701,073 thousand CGT, and Korea's new ship orders was 234,132 thousand CGT during the same period, 33.4% of the total volume of world new ship orders followed by China (176,631 thousand CGT, 25.2%) and Japan (151,176 thousand CGT, 21.6%). The world shipbuilding industry began to rapidly grow from 2003, reaching the peak in 2007, of which the total volume of world new ship orders rose to 87,288 thousand CGT, 12.5% of the total volume of world new shop orders for the last two decades. However, the world shipbuilding industry began to decline from 2008, when the global financial crisis arose. In 2016, the volume of world new ship orders considerably dropped to 11,150 thousand CGT, the lowest for the last two decades.

Korea's modern ship-building industry, in a practical sense, began in 1978 when Hyundai Heavy Industries Co., Ltd. was established by Joo-Young Chung, the founder and the former CEO of Hyundai Group. Since then, Korea's shipbuilding industry has continuously grown, and surpassed Japan in 1993 taking the first place in new ship orders. For the last two decades (1997-2016), the total volume of Korea's new ship orders awarded amounted to 234,132 thousand CGT with ranking first and with sharing 33.4% of the world new ship orders. During the same period, Korea ranked first for nine times, second for ten times, and third for one time in new ship orders by CGT.

In 2003, Korea shared 42.9% of the world ship orders, and, in 2011, 43.9 % of the world ship orders by CGT. In 2007, Korea obtained new ship orders of 32,861 thousand CGT which was the record in volume with sharing 37.6% of the world ship orders and with ranking first, but Korea recorded huge drop in new ship orders in the following year due to global financial crisis of 2008. In 2009, Korea recorded another huge drop, from 15,833 thousand CGT to 3,443 thousand CGT with handing over the first and the second place to China and Japan respectively. It was only in 2009 that Korea ranked third in volume of new ship orders for the last two decades. Korea's big three ship yards, Hyundai Heavy Industries Co., Ltd. ("Hyundai"), Daewoo Shipbuilding & Marine Engineering Co., Ltd. ("Daewoo"), and Samsung Heavy Industries Co., Ltd. ("Samsung"), have been among world top five for the same period. As of March 2016, Hyundai, Daewoo, and Samsung ranked first, second, and fourth respectively by order-book value.[14]

On the other hand, Japan was, in 1999, surpassed by Korea losing first place, and was, in 2006, also surpassed by China losing second place. China's shipbuilding made rapid growth in 2003, almost three times growth, and ranked first in 2009 with taking 42.1% share of world new ship orders. China has all the way ranked first since 2012 with taking more than 30% of world new ship orders.

Table 1
World new ship orders for the last two decades (1997-2016)



	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
World	23,197	18,824	18,990	28,932	23,648	18,931	43,828	47,359	41,873	61,091	87,288	41,386	16,580	38,625	30,846	24,421	50,247	37,747	36,110	11,150
Korea	6,764	4,682	6,325	10,459	6,990	5,611	18,810	15,732	13,571	22,010	32,861	15,833	3,443	11,172	13,550	6,823	15,553	12,076	10,087	1,780
China	1,211	659	1,924	1,935	2,802	2,112	6,107	6,765	6,606	15,805	31,382	13,148	6,987	16,083	8,224	8,110	17,671	13,280	11,830	3,990
Japan	8,790	6,225	4,934	7,449	7,932	6,999	12,335	14,280	9,446	11,865	10,017	6,525	3,895	5,373	4,073	4,318	6,941	8,819	9,660	1,300
Others	6,432	7,258	5,807	9,089	5,924	4,209	6,576	10,582	12,250	11,411	13,028	5,880	2,255	5,997	4,999	5,170	10,082	3,572	4,533	4,080

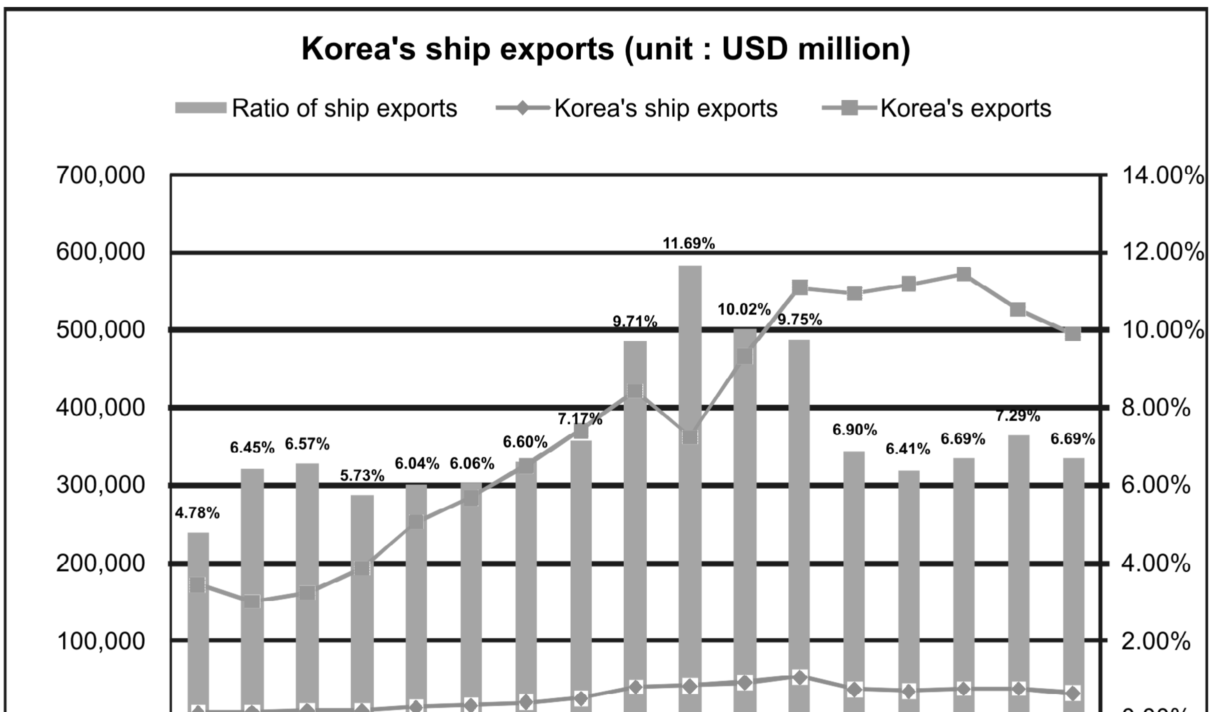
(*Source:*IHS-Fairplay, Lloyd's World Shipbuilding Statistics)

In 2016, the volume of world new ship orders dropped to 11,150 thousand CGT, the lowest for the last two decades, due to the long lasting depression of global shipping industry caused by freight rates decline.[15] In 2015, most shipping segments suffered historic low levels of freight rates and weak earnings, caused by weak demand and oversupply of new tonnage.[16] In 2016, Korea was awarded new ship orders of 1,780 CGT only, the lowest for the last two decades, with taking the second place after China. The table 1 below will show world new ship orders for the previous two decades in detail.

In Korea, ship export has been a major export field. Korea's ship exports for the period of 2000~2016 were USD 416,055 million, 8.0% of Korea's total exports of USD 5,206,442 million. In 2004, Korea's exports recorded the highest growth of 31.0% in 2000's, and Korea's ship exports also recorded 38.0% growth. On the other hand, in 2016, Korea's exports dropped below USD 0.5 trillion for the first time since 2011 and recorded 5.9% decrease, and Korea's ship exports dropped to USD 33,155 million, the lowest since 2008. These illustrate that Korea's exports have been much affected by Korea's ship exports, and the importance of Korea's shipbuilding industry in the exports.

Korea's ship exports, in 2000, amounted to USD 8,229 million, the lowest in 2000's, and , in 2011, amounted to USD 54,133 million, the highest in 2000's. During the period of 12 years of 2000~2012, Korea's ship exports have continuously grown without stopping. In 2008, Korea's ship exports grew at

Table 2
Korea's ship exports (2000-2016)



	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Ratio of ship exports	4.78%	6.45%	6.57%	5.73%	6.04%	6.06%	6.60%	7.17%	9.71%	11.69%	10.02%	9.75%	6.90%	6.41%	6.69%	7.29%	6.69%
Korea's ship exports	8,229	9,699	10,672	11,104	15,321	17,231	21,493	26,632	40,968	42,483	46,735	54,133	37,828	35,870	38,338	38,420	33,155
Korea's exports	172,267	150,439	162,471	193,817	253,845	284,419	325,465	371,489	422,007	363,533	466,384	555,214	547,870	559,632	572,665	526,757	495,426

(*Source*: Korea Tax Service[17])

53.8% to reach USD 40,968 million from USD 26,632 million of 2007, which is the highest growth in 2000's. This remarkable growth mainly resulted from shipbuilding industry boom in the early 2000's and Korea shipbuilding industry's competitiveness together with the government support. However, in 2012, Korea's ship exports dropped to USD 37,828 million from USD 54,133 million of 2011, which is 30.1% drop, the highest drop in 2000's. Since then, Korea's ship exports have shown declining trend, and dropped to USD 33,155 million in 2016, which is retreat back to 2007. The table 2 will show Korea's total exports and Korea's exports and ship exports, and the relation between them in 2000's.

3. OVERVIEW OF EXPORT CREDIT INSURANCE

As aforementioned, export credit insurance is a sort of export credit which includes export credit guarantee, export credit insurance, direct credit/financing, refinancing, and interest rate support.[18] Export credit supports were initially introduced to support exports[19], and they have been operated in many countries by the government or by the public body.[20] An institution operating export credit programmes is called an export credit agency ("ECA")[21], which plays primary role of removing or reducing the uncertainties and risks which exporters or their banks face in international trades by providing export credit insurance programmes.[22] Export credit operated by an ECA on government account is called "officially supported export credit"[23], and those ECAs are called "official export credit agencies".[24]Most OECD countries maintain ECAs either in the form of ministerial departments, or publicly owned orsupported companies.[25]Officially supported export credits began in 1919 by the Export Credit Guarantee Department (the "ECGD")[26] of the United Kingdom to encourage and support exports[27], and the International Union of Credit & Investment Insurers (the "Berne Union") was formed in 1934.[28]Officially supported export credits became by 1980s significant instruments for facing up to competition abroad.[29]Official export credit support plays an enhanced role in periods of economic uncertainty, for instance, during the period of the global financial crisis of 2008, through filling the gap where market capacities are temporarily limited[30], and also promotes national exports.[31] Official export credit could be granted to the exporters who cannot provide collaterals for export financing to commercial banks.[32] Official export credit agencies do not aim at making a profit[33], but do aim at supporting exports. Normally, export credit insurance programmes charge less premium than the commercial entities because they are operated for non-commercial purpose or by the public body in order to support exports.

On the other hand, official export credit supports have brought the concern that they may distort the fair competition in international trades.[34] Although official export credit supports (export credit, export credit insurance) were accepted by the WTO (former the GATT)[35], many official export credit supports have been imposed of countervailing measures by the importing countries, and many of these measures have been filed at the World Trade Organization ("WTO") Dispute Settlement Body by the exporting countries. The WTO panel, in EC – Countervailing Measures on DRAM Chips (DS299), found that an officially supported export credit constitutes a financial contribution in the sense of Article 1.1(a) of the Agreement on Subsidies and Countervailing Measures ("SCM Agreement").[36]In 1978, the OECD prepared the "Arrangement on Guidelines for Officially Supported Export Credits"[37]to provide a framework for the orderly use of officially supported export credits and to provide for a level playing field (whereby competition is based on the price and quality of the exported goods and not the financial terms provided) and working to eliminate subsidies and trade distortions related to officially supported export credits.[38]

Korea enacted the Export Insurance Act in 1968, and export credit insurance business commenced in 1969 by the Korean Reinsurance Corporation.[39] Export credit insurance business was transferred to the Export-Import Bank of Korea in 1977, and was again transferred, in 1992, to the Korea Export Insurance Corporation (the "KEIC") which was found in 1992 as the sole export credit insurance agency. In 2010, the Export Insurance Act was wholly amended as the Trade Insurance Act in order to provide import credit insurance besides export credit insurance, and the KEIC was renamed as the K-sure. The K-sure operates import credit insurance programmes as well as export credit insurance programmes with the trade insurance fund which is mainly contributed by the Korea Government with the approval of the National Assembly, and under the underwriting limit approved each year by the National Assembly.

The K-sure operates multiple types of trade insurance programmes which consist of export credit insurance, overseas investment insurance, import credit insurance, and export credit guarantee. Those trade insurance programmes protect and support Korean businesses in their export, overseas construction, and overseas investment by covering risks concerning the transactions.Korea's export credit insurance business volume (including import export credit insurance) has continuously grown to reach the highest KRW 203.7 trillion (approximately USD 170 billion) in 2012[40], which is the fourth largest volume in the world.

4. EXPORT CREDIT INSURANCE PROGRAMMES IN SUPPORT OF SHIP EXPORTS

4.1. Medium and long term export credit insurance programmes

The two main export credit insurance programmes in support of ship exports are export bond insurance, and medium and long term export credit insurance. Export bond insurance programmes have contributed to ship exports more than medium and long term export credit insurance programmes have. Therefore, export bond insurance programmes will be reviewed in further detail in the following chapter.

The two main medium and long term export credit insurance programmes in support of ship export are a medium and long term export credit insurance (supplier credit), and a medium and long term export credit insurance (buyer credit). There is a medium and long term export credit insurance (pre-shipment) other than those two main insurance programmes. A medium and long term export credit insurance (pre-shipment) covers the risks associated with the impossibility of the export after concluding a contract, but it is very rarely used in support of a shipbuilding contract.

The financing scheme for an export of capital goods comes into two types of a supplier credit and a buyer credit by who undertakes to provide the fund required for the performance of a contract.[41] A supplier credit means a financing scheme in which a supplier (or an exporter) is responsible for providing the fund, and a buyer credit means a financing scheme in which a buyer (or an importer) is responsible for providing the fund.[42] Whilst an exporter would be a borrower under a loan agreement, if any, for the international transaction in a supplier credit, an importer would be a borrower under a loan agreement, if any, in a buyer credit. While an importer will purchase on deferred payment terms with the credit provided by an exporter in a supplier credit,[43] an exporter will be paid on milestone basis during the construction in a buyer credit. In a buyer credit, the funds are not usually disbursed directly to a borrower (normally an importer)[44], but directly to an exporter or to an escrow account. The parties of an international trade will choose either a supplier or a buyer credit considering the cost of funding for the trade. In 2000's, a buyer credit overrides a supplier credit in shipbuilding contracts, which is presumed to be due to low interest rate in the international financial market.

Whilst medium and long term export credit insurance (supplier credit) covers the risks of non-payment to an exporter by an importer, a medium and long term export credit insurance (buyer credit) covers the risks of non-repayment to a lender by an importer. Therefore, an exporter will be an insured under a medium and long term export credit insurance (supplier credit), and a lender which provides loan will be an insured under a medium and long term export credit insurance (buyer credit). A medium and long term export credit insurance policy by an official export credit agency like the K-sure is, in international financial market, treated equal to the payment guarantee by the government. Therefore, in a buyer credit, an importer's credit rating is replaced by that of the government providing official medium and long term export credit insurance. On the other hand, an exporter's credit rating in a supplier credit, is also replaced by that of the government in case the insurance policy is assigned to a lender bank. If medium and long term export credit insurance policy is provided, a lender bank will provide finance at a lower interest rate than otherwise.[45] Therefore, medium and long term export credit insurance policy contributes to reducing the cost of funding including interests. In a buyer credit, providing funding is up to an importer, and thus, whether the K-sure provides medium and long term export credit insurance (buyer credit) policy for a shipbuilding contract is very essential for choosing an exporter. When an official export credit agency in an exporting country agrees to issue medium and long term export credit insurance (buyer credit) policy, the company in that exporting country will obtain priority in a bidding for a shipbuilding contract. In a supplier credit, an exporter will be able to borrow money with favourable conditions by assigning medium and long term export credit insurance (supplier credit) policy to a lender[46], and an exporter will be able to offer very favourable conditions such as lower interest rate, longer deferred payment terms, etc., which will bring them more chance to conclude a contract.

As the figure 1 illustrates, medium and long term export credit insurance (buyer credit) for a shipbuilding contract normally proceeds as follows:

(1) An exporter (shipbuilder) enters into a shipbuilding contract with an importer. In many cases, an exporter applies for a letter of intent to the K-sure prior to submitting a bid or concluding a contract.

(2) A bank(s) and an importer conclude a provisional loan agreement.

(3) A bank(s) applies for medium and long term export credit insurance (buyer credit) to the K-sure.

(4) The K-sure evaluates the application including an importer's creditworthiness, shipping market condition, importing country's political risk, etc., and then, issues medium and long term export credit insurance (buyer credit) policy.

(5) A bank(s) and an importer conclude a final loan agreement.

(6) A bank(s) disburses funds to an importer according to a loan agreement,and an importer pays to an exporter according to a shipbuilding contact with the funds disbursed. In practice a bank(s) will disburse directly to an exporter.

(7) An importer fails to repay the loan to a bank(s).

(8) A bank(s) makes insurance claims to the K-sure.

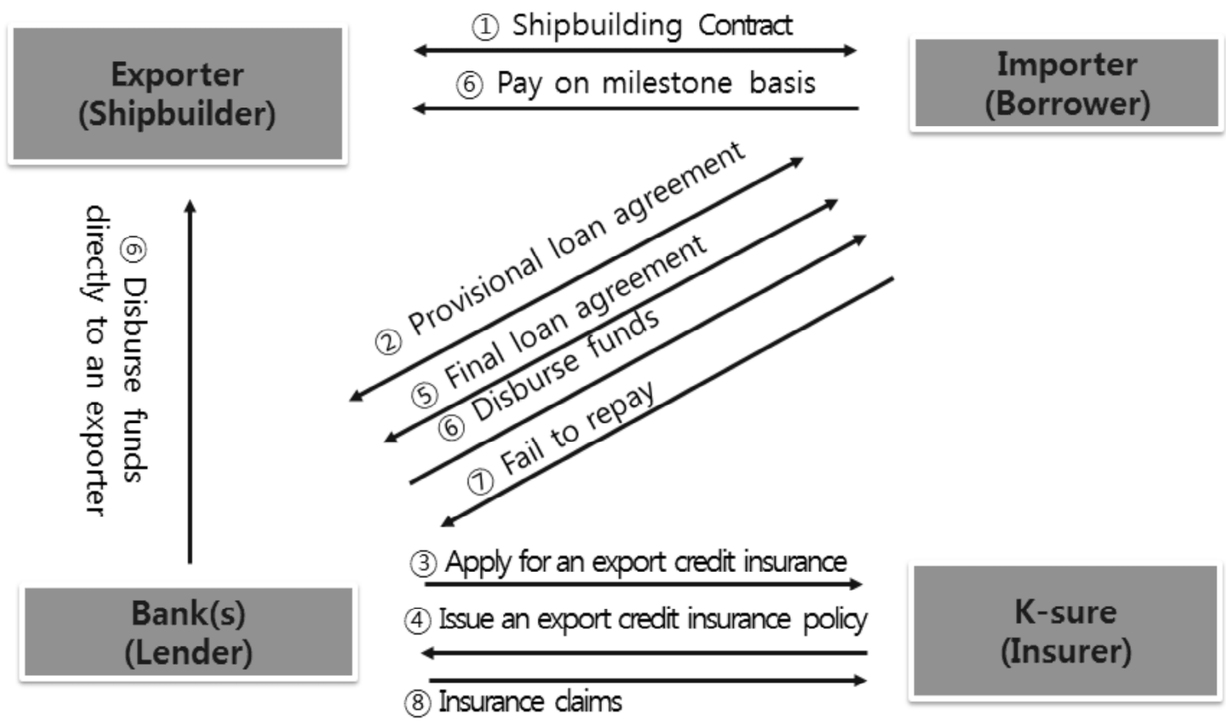


Figure 1: Diagram for medium and long term export credit insurance (buyer credit)

4.2. Export Bond Insurance Programmes in Support of Ship Exports

4.2.1. Operations of Export Bond Insurance Programmes

In export of capital goods such as industrial plants or ships, a bond or a guarantee is normally required as a security for an exporter's performance of a contract. There is a range of bonds or guarantees such as tender guarantee (or bid bond), performance guarantee, advance payment guarantee (or refund guarantee), warranty guarantee, maintenance guarantee, etc. These bondsor guarantees are issued in favour of an importer by a financial institution at the request of an exporter. Normally, an issuance of a bond is set as a condition precedent to the payment of contract price. Afinancial institution which issues such a bond or a guarantee shall pay to a beneficiary (normally an importer) on demand in the event an exporter fails to perform a contract or other event of calling occurs. A financial institution will recourse to an exporter once they receive a demand for payment from a beneficiary. Therefore, a bond or a guarantee is, in practice, considered as exporter's contingent liability. For this reason, a financial institution will issue a bond or a guarantee within the credit limit of an exporter, if not, they will request a security in return for issuance of a bond. An export bond insurance policy is well accepted as a security for a bond[47], and it facilitates the issuance of a bond. When an exporter uses up their credit limits and is unable to offer a security, which happens very often, export bond insurance is essential for the conclusion and the payment of a contract. In many instances,an exporter requests an export bond insurance support prior to concluding a contract.

In a shipbuilding contract on a buyer credit, which is more common than a supplier credit in 2000's, payments are normally paid in five instalments[48], mostly in five equal instalments: first instalment is paid at the time of issuance of a refund guarantee (RG), second instalment at the time of steel cutting, third instalment at the time of keel-laying, fourth instalment at the time of launching, and the fifth instalment at the time of delivery. In the event a shipbuilder fails to deliver a ship according to a contract or falls in event of default under a contract, an importer will suffer the losses of the payment already paid to a builder (an exporter), amounting to maximum 80 percent of a contract price,with the interest accrued. Therefore, an importer requests a security for the repayment of the instalments paid and the interests accrued together, and an exporter shall provide a refund guarantee issued by a creditworthy financial institution for such security.As afore-mentioned in a buyer credit, the funds for the payment are not usually disbursed directly to an importer[49], but directly to an exporter. Thus a loan agreement in a buyer credit usually requires a refund guarantee as a condition precedent for the disbursement. Even in a shipbuilding contract on a supplier credit[50], down payment at minimum 15% of a contract price is paid, and aadvance payment guarantee for the down payment is required.

As aforementioned, a financial institution issues a refund guarantee within the credit limit of an exporter. Otherwise, a financial institution requires a security for a refund guarantee, and export bond insurance is accepted as a security. A refund guarantee could be issued with the help of export bond insurance policy, even in case when it is not issued. In some instances, a financial institution issues a refund guarantee only after the K-sure issues an export bond insurance policy.With export bond insurance policy, a financial institution will charge less premiumthan otherwise.Even in a supplier credit shipbuilding contract[51], 20% of a contract price is paid before delivery of a ship, in which case a refund guarantee for the repayment is also required.

K-sure operates two types of export bond insurance programme: export bond insurance (for financial institutions), and export bond insurance (for exporters). Export bond insurance (for financial institutions) covers the losses suffered by a financial institution which issues a bond or a guarantee (i.e. a refund guarantee in a shipbuilding contract) in favour of an importer at the request of an exporter. Export bond insurance (for financial institutions) covers the risk of unfair calling as well as fair calling. Whilst the ECGD's bond insurance policy[52] covers the risks of fair calling due to certain political events[53], the K-sure's export bond insurance (for financial institutions) covers the risks of fair calling without limitation. A financial institution will be a policy holder as well as an insured under export bond insurance (for financial institutions).Whilst a guarantee or a bond is normally one-sided obligation, export credit insurance is based on mutual relationship between an export credit agency and an insurer other than that between an exporter and an importer.[54] As the figure 2 illustrates, export bond insurance (for financial institutions) programme in support of a refund guarantee normally proceeds as follows:

(1) An exporter (a ship builder) enters into a contract with an importer.

(2) An exporter requests a financial institution to issue a refund guarantee.

(3) A financial institution applies for export bond insurance (for financial institutions) to the K-sure.

(4) The K-sure evaluates the performance competence of an exporter including financial standing, and issues an export bond insurance policy.

(5) A financial institution issues a refund guarantee in favour of an importer.

(6) An importer pays each instalment according to the performance of a contract.

(7) An exporter fails to perform a contract or other event of calling occurs.

(8) An importer demands for payment under a refund guarantee to a financial institution.

(9) A financial institution pays to an importer immediately after receiving demand for payment.

(10) A financial institution makes insurance claims to the K-sure.

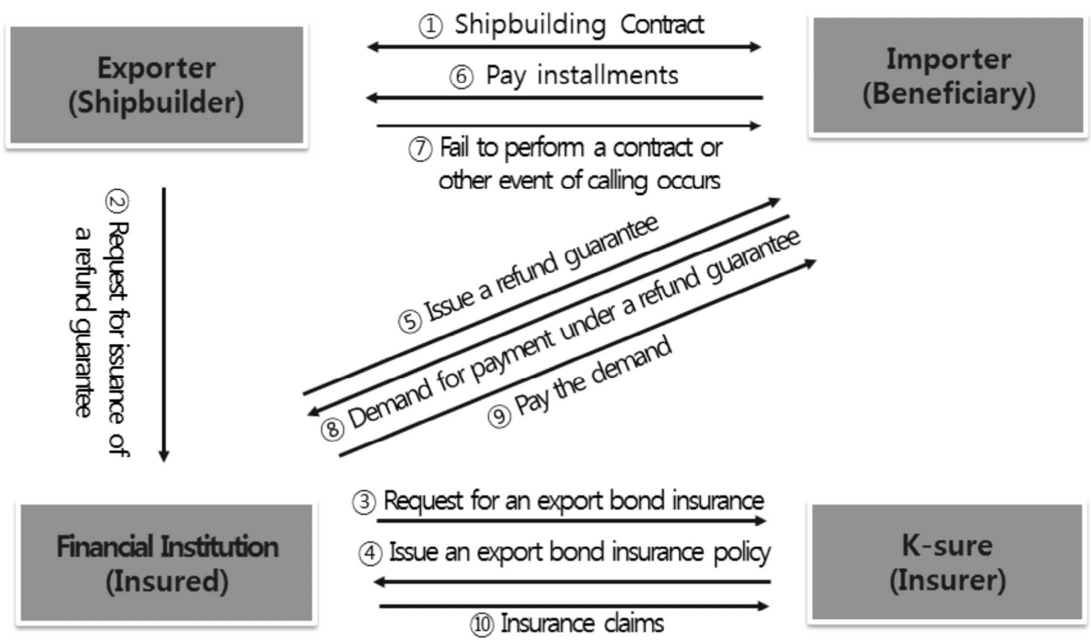


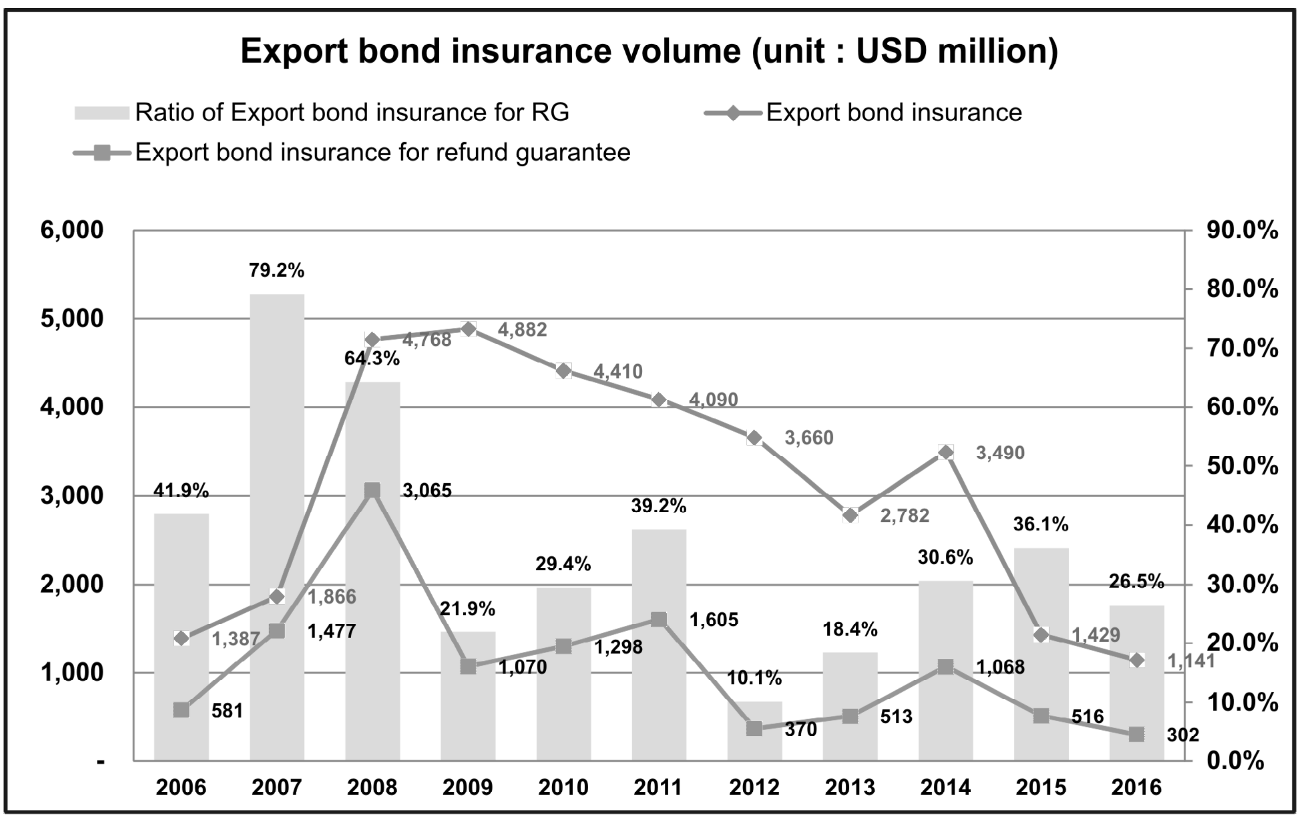
Figure 2: Diagram for export bond insurance (for financial institutions)

On the other hand, under export bond insurance (for exporters), an exporter purchases an export bond insurance policy for a financial institution which will then issues a bond or guarantee (i.e. a refund guarantee in a shipbuilding contract) in favour of an importer with a security of the policy. An exporter will be a policy holder, and a financial institution will be an insured.Export bond insurance (for exporters), in reality, would be the same as a counter guarantee[55] issued in favour of a financial institution which then will issue a direct guarantee to an importer. Whilst an export bond insurance (for financial institutions) covers up to maximum 100% of the guaranteed amount and the specific coverage is decided by the K-sure on a case by case basis[56] an export bond insurance (for exporters) covers the same amount of a direct guarantee. An insurancehas some types of exemption, but a guarantee does not. For these reasons, it would be said that export bond insurance (for exporters) brings more risk than export bond insurance (for financial institutions) for the K-sure's perspective. Thus, export bond insurance (for exporters) isnormally provided for an exporter with very good credit rating. The K-sure provides either export bond insurance (for financial institutions) or export bond insurance (for exporters) for a single export transactiontaking into an exporter's credit rating and their request account.

The total volume of export bond insurance for the period of 2006~ 2016 by the K-sure was USD 33,905 million, and the total volume of export bond insurance for refund guarantees for ship exports was USD 11,865 million, 35.0% of the total volume. The total volume of export bond insurance had rising trend until the year of 2009 reaching USD 4,882 million, but moved downward from 2010 and dropped to USD 1,141 million in 2016, the lowest volume during in 2000's except the year of 2005. The volume of export bond insurance for refund guarantees was USD 581 million in 2006, and considerably rose to USD 3,065 million in 2008, the highest volume for the period of 2006 ~ 2016 with taking 64.3% of the total volume of export bond insurance, which was mostly due to the global shipbuilding industry boom and Korea's winning new ship orders. However, the volume dropped dramatically in 2009, and has been downwards, and the volume dropped to USD 302 million in 2016, the lowest for the period However, the volume dropped dramatically in 2009, and has been downwards, and the volume dropped to USD 302 million, the lowest for the period. The chart below shows the volume of an export bond insurance and the volume of an export bond insurance for refund guarantees respectively for theof 2006 ~ 2016.

The table 3 shows the volume of an export bond insurance and the volume of an export bond insurance for refund guarantees respectively and the relation between them for the of 2006 ~ 2016.

Table 3
Export bond insurance volume



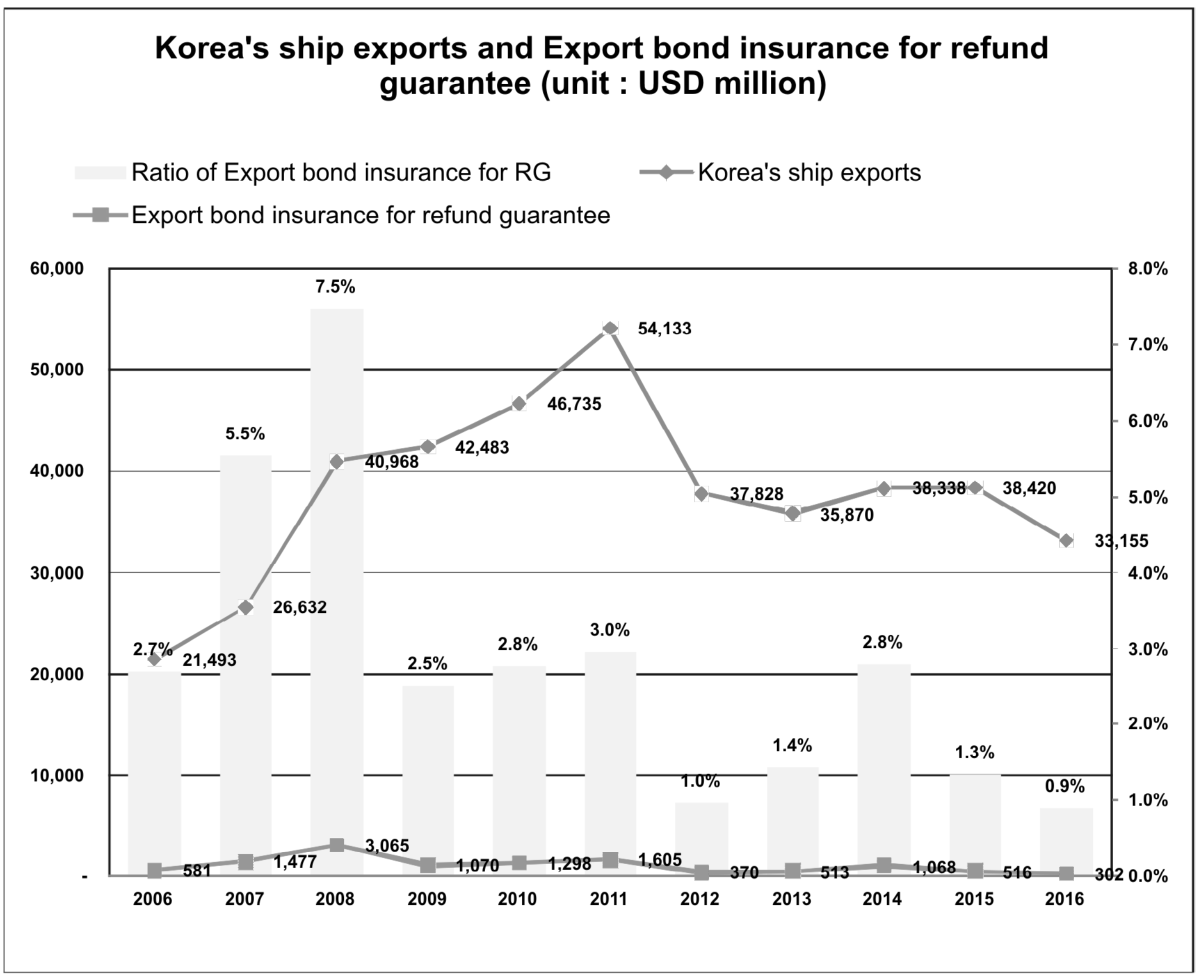
(*Source*: the K-sure)

4.2.2. Support Effects of Export Bond Insurance Programmes on Ship Exports

In Korea, a ship is to be counted in export volume only when it is built and delivered to an importer. For the period of 2006 ~ 2016, Korea's total volume of ship exports was USD 416,055 million, and the total volume of export bond insurance for refund guarantees for the same periodwas USD 11,865 million, 2.9% of the total ship exports. The ratio of export bond insurance volume for refund guarantees to Korea's ship exports during the same period varies from 0.9% of 2016 to 7.5% of 2008. In 2008, the volume of export bond insurance for refund guarantees recorded USD 3,065 million, the highest for the period of 2006 ~ 2016, and the ratio of it to ship exports also reached the highest of 7.5%. However, in 2016, the volume of export bond insurance for refund guarantees recorded USD 302 million, the lowest for the period of 2006 ~ 2016, and the ratio of it to ship exports also reached the lowest of 0.9%.

Korea's ship exports rose highly to USD 40,968 million in 2008, and had continuously risen for the following three consecutively years of 2009~2011. This is because the ships supported in 2008 by the export bond insurance programmes had been built for the period of 2008 ~ 2011 and had been delivered

Table 4
Korea's ship exports and Export bond insurance for refund guarantee



(*Source*: Korea Tax Service[57], the K-sure) to importers. The volume of export bond insurance for refund guarantees, in 2012, made huge drop to USD 370 million from USD 1,065, and Korea's ship exports have moved downwards since 2012. This shows that export bond insurance programmesfor refund guarantees haveaffected and contributed to the growth of Korea's ship exports. The table 4 shows the flow of Korea's ship exports and the export bond insurance volume for refund guarantees, and the support effects on the former by the latter.

5. CONCLUSIONS

The total volume of world new ship order for the last two decades (1997-2016) amounted to 701,073 thousand CGT, and Korea's new ship orders was 234,132 thousand CGT during the same period, 33.4% of the total volume of world new ship orders followed by China (176,631 thousand CGT, 25.2%) and Japan (151,176 thousand CGT, 21.6%). The world shipbuilding industry began to rapidly grow from 2003 reaching the peak in 2007, but it began to decline from 2008, when the global financial crisis arose. In 2016, the volume of world new ship orders considerably dropped to 11,150 thousand CGT.

Korea ranked first in the total volume of new ship orders awarded for the last two decades (1997-2016) with sharing 33.4% of the world new ship orders. Korea's export credit insurance programmes, in particular, export bond insurance programmes, have much contributed to the growth of Korea's ship exports in addition to Korean shipbuilding industry's competitiveness.

Export credit insurance were initially introduced to support exports, and they have been operated, in many countries, by the government or by the public body. There is growing evidence that officially supported export credit insurance programmes are effective in promoting and stimulating exports.[58] In Korea, export credit insurance began in 1969, and has been operated by a public body under the Trade Insurance Act (formerly the Export Insurance Act).

This paper reviewed the world shipbuilding industry for the last two decades, and analyses Korea's ship exports. This paper briefly overviews export credit insurance as an official export support, and reviews the roles of two export credit insurance programmes in support of ship exports: medium and long term export credit insurance programmes, and export bond insurance programmes, focusing the support effects on ship exports. Normally, export credit insurance programmes charge less premium than the commercial entities because they are operated either for non-commercial purpose or on non-commercial basis in order to support exports. Therefore, export credit insurance programmes will help to reduce the cost in international transactions. Furthermore, official supported export credit insurance programmes are offered to such transactions of high risks to which commercial entities are reluctant to provide insurance programmes.

Even if international seaborne trades have steadily increased in 2000's, freight rates have steadily declined since 2008. Most shipping segments, in 2015, suffered historic low levels of freight rates and weak earnings.[59] Taking a hard look at the long lasting maritime industry depression, the lowing the cost of ship purchasing with support of export credit insurance programmes would be another solution for overcoming the depression in the future.

NOTES

1. IHS-Fairplay, Lloyd's World Shipbuilding Statistics.
2. Malcolm Stephens, *The Changing Role of Export Credit Agencies,* International Monetary Fund (1999), p. 1.

3. Malcolm Stephens,*supra note 2,* at 85.
4. Malcolm Stephens,*supra note 2,* at 98-99.; It is also called as "public export credit". (*see* Peter Egger and Thomas Uri, "Public Export Credit Guarantees and Foreign Trade Structure: Evidence from Austria", The World Economy, Vol. 29, Issue 4.(2006), p.400.)
5. Berne Union (The International Union of Credit & Investment Insurers) website. (http://www.berneunion.org/about-the-berne-union/).; The International Union of Credit & Investment Insurers, *Berne Union 2016,*(2016), p.8. (available at http://www.berneunion.org/wp-content/uploads/2012/10/BU-Yearbook-2016.pdf.).
6. The ECGD has been operating export credit under the name of the UK Export Finance (UKEF) since 2 September 2013. The website is https://www.gov.uk/government/organisations/uk-export-finance.
7. Malcolm Stephens,*supra note 2,* at 1.; Carole Murray et. al, *Schmitthoff Export Trade : The Law and Practice of International Trade,* 11th ed., Thomson Reuters (2010), p.441.
8. Berne Union (The International Union of Credit & Investment Insurers) website.
   (http://www.berneunion.org/about-the-berne-union/).;
   The International Union of Credit & Investment Insurers, *Berne Union 2016,*(2016), p.8.
   (available at http://www.berneunion.org/wp-content/uploads/2012/10/BU-Yearbook-2016.pdf.).
9. David Camino, Clara Cardone*"The EU Proposal for a Council Directive on Export Credit Insurance: A Critical Evaluation",* Geneva papers on Risk and Insurance – Issues and Practice (1997), p.414.
10. Roberto Soprano, "*Doha Reform of WTO Export Credit Provisions in the SCM Agreement: The Perspective of Developing Countries*," Journal of World Trade Vol. 44 No. 3. (Jun 2010), pp.611-632.; Filip Abraham, Gerda Dewit, *"Export Promotion Via Official Export Insurance"*, Open Economies Review (2000), p.6.
11. Panel Report, "EC – Countervailing Measures on DRAM Chips", WT/DS299/R, para.7.85.
    "7.85 The second action which was found to be a subsidy was the extension of a guarantee by theKorea Export insurance Corporation ("KEIC") which is the official export credit agency of Korea. ...."
    (Here theKorea Export insurance Corporation is the former name of the Korea Trade Insurance Corporation.)
12. The article 36 of the Korea Trade Insurance Act (2016 Revision) implies that export insurance programmes should be operated on the government account

    Article 36 (Settlement of Profits and Losses)

    (1) All profits accrued as a result of settlement of accounts of the Fund shall be accumulated as reserve.

    (2) Any loss accrued as a result of settlement of accounts of the Fund shall be covered by the reserve fund under paragraph (1), and if the reserve fund is insufficient to cover such deficit, the shortages shall be covered by the Government.
13. Panel Report, "EC – Countervailing Measures on DRAM Chips", WT/DS299/R, para.7.87.
14. Available at https://www.statista.com/statistics/257865/leading-shipbuilding-companies-worldwide-based-on-volume/
15. Although international seaborne trades have steadily increased in 2000's, freight rates have steadily declined since 2008.(UNCTAD, *Maritime Review 2016*, UNCTAD (2016), pp.4-5, pp.51-52.).
16. UNCTAD, *supra note 15*, at 51.
17. Available at https://unipass.customs.go.kr:38030/ets/.
18. OECD Arrangement on Officially Supported Export Credits 2016.

    5. SCOPE OF APPLICATION

    The Arrangement shall apply to all official support provided by or on behalf of a government for export of goods and/or services, including financial leases, which have a repayment term of two years or more.

    a) Official support may be provided in different forms:

1) Export credit guarantee or insurance (pure cover).

2) Official financing support: direct credit/financing and refinancing, or interest rate support.

3) Any combination of the above.

19. Malcolm Stephens, *The Changing Role of Export Credit Agencies,* International Monetary Fund, 1999, p.1.
20. Berne Union (The International Union of Credit & Investment Insurers) website. (http://www.txfnews.com/buprint/GetBUMembers#)
The International Union of Credit & Investment Insurers, *Berne Union 2016,*(2016). (available at http://www.berneunion.org/wp-content/uploads/2012/10/BU-Yearbook-2016.pdf.).
21. Malcolm Stephens,*supra note 2,* at 85.
22. Malcolm Stephens,*supra note 2,* at 7-8.
23. Malcolm Stephens,*supra note 2,* at 98-99.; It is also called as "public export credit". (*see* Peter Egger and Thomas Uri, "Public Export Credit Guarantees and Foreign Trade Structure: Evidence from Austria", The World Economy, Vol. 29, Issue 4.(2006), p.400.)
24. Berne Union (The International Union of Credit & Investment Insurers) website. (http://www.berneunion.org/about-the-berne-union/).; The International Union of Credit & Investment Insurers, *Berne Union 2016,*(2016), p.8. (available at http://www.berneunion.org/wp-content/uploads/2012/10/BU-Yearbook-2016.pdf.).
25. Ernst Baltensperger,Nils Herger, *"Exporting against Risk? Theory and Evidencefrom Public Export Insurance Schemesin OECD Countries",*Open Econ Rev (2009), p.546.; Filip Abraham, Gerda Dewit, *supra note 10,*at. 6.
26. The ECGD has been operating export credit under the name of the UK Export Finance (UKEF) since 2 September 2013. The website is https://www.gov.uk/government/organisations/uk-export-finance.
27. Malcolm Stephens,*supra note 2,* at 1.; Carole Murray et. al, *supra note 6*, at.441.
28. Berne Union (The International Union of Credit & Investment Insurers) website. (http://www.berneunion.org/about-the-berne-union/).;
The International Union of Credit & Investment Insurers, *Berne Union 2016,* 2016, p.8. (available at http://www.berneunion.org/wp-content/uploads/2012/10/BU-Yearbook-2016.pdf.).
29. John E. Ray, *Managing Official Export Credits:The Quest for a Global Regime,* Institute for International Economics, 1996, P. 2.
30. Janet West, *"Facilitating Export Credits",*berne union 75, the Berne Union (2010), p.35.
31. David Camino, Clara Cardone*"The EU Proposal for a Council Directive on Export Credit Insurance: A Critical Evaluation",* Geneva papers on Risk and Insurance – Issues and Practice (1997), p.414.
32. Yehuda Kahane, *"Insurance and Risk Management of Foreign Trade Risks",* Geneva papers on Risk and Insurance – Issues and Practice (1986), p.275.
33. Carole Murray *et. al, supra note 6*, at 443.
34. Roberto Soprano, "*Doha Reform of WTO Export Credit Provisions in the SCM Agreement: The Perspective of Developing Countries*," Journal of World Trade Vol. 44 No. 3, Jun 2010, pp.611-632.; Filip Abraham, Gerda Dewit, *supra note 10,* at 6.
35. David Camino, Clara Cardone*"The EU Proposal for a Council Directive on Export Credit Insurance: A Critical Evaluation",* Geneva papers on Risk and Insurance – Issues and Practice (1997), p.414.
36. Panel Report, "EC – Countervailing Measures on DRAM Chips", WT/DS299/R, para.7.49.
37. In January 2004, the title was changed as "the Arrangement on Guidelines for Officially Supported Export Credits".
38. John E. Ray, *supra note 29,* at 2.;OECD, the Arrangement on Guidelines for Officially Supported Export Credits Chapter See Chapter I.1 Purpose.

39. The KEIC, *Annual Report 2009*, the KEIC (2010), p.5.
40. The K-sure, *Annual Report 2015*, the K-sure (2016), p.18.
41. Kim, Sang Man, "A Comparative Study on a Supplier Credit and a Buyer Credit in international Transactions of capital goods", The International Commerce & Law Review, Vol. 48. (2010), p.129.
42. Richard Willsher, *Export Finance*, Macmillan Press (1995), p.66.
43. Stephenson Harwood, *Shipping Finance, 3rd ed.*, Euromony Institutional Investor (2006), P.46.
44. Richard Willsher, *supra note 42*, at 67.
45. Carole Murray et. al, *supra note 6*, at 443.
46. Eric Bishop, *Finance of International Trade*, Elsevier (2006), pp.101-102.
47. Eric Bishop, *supra note 46,* at 101.
48. Stephenson Harwood, *supra note 43,* at 47.
49. Richard Willsher,*supra note 42*, at 67.
50. A supplier credit means a financing scheme in which a supplier (or an exporter) is responsible for providing the fund. (Richard Willsher, *supra note 42*, at 66.).
51. Stephenson Harwood, *supra note 43,* at 46-47.
52. The ECGD's bond insurance policy is the same as export bond insurance (for financial institutions) of the K-sure.
53. The UKEF (the trade name of the ECGD) website, available at https://www.gov.uk/guidance/bond-insurance-policy.; ECGD's Specimen Bond Indemnity Policy, Article 3 Causes of Loss, available at https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/187538/speci-bip4-uk-bank.pdf.
54. Anders Grath, *The Handbook of International Trade and Finance*, 3rd ed., Kogan Page Limited (2014), P.122.
55. The Uniform Rules for Demand Guarantee (ICC Publication No. 758) defines "counter guarantee" as any signed undertaking that is given by the counter-guarantor to another party to procure the issue by that other party of a guarantee or another counter-guarantee and that provides for payment upon the presentation of a complying demand under the counter-guarantee issued in favor of that party. (article 2).".; UKEF's Bond Insurance Policy, Article 1.Definitions, available at https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/596129/specimen-bond-insurance-overseas-bank-March-17.pdf.
56. An export bond insurance (for financial institutions) stipulates in article 20 that:

    "The Insurable value will be guaranteed amount, and the insured amount will be the amount calculated by multiplying the insurable value by the percentage decided by the K-sure within the limit of 100%.".
57. Available at https://unipass.customs.go.kr:38030/ets/.
58. Koen J. M., *"The Private Export Credit Insurance Effect on Trade"*, Journal of Risk and Insurance, Vol.82, No.3.(2015), p. 602.
59. UNCTAD, *supra note 15*, at .4-5, 51.

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Yehuda Kahane, *"Insurance and Risk Management of Foreign Trade Risks",* Geneva papers on Risk and Insurance – Issues and Practice (1986).

Website

Berne Union http://www.berneunion.org/about-the-berne-union/

K-sure https://www.ksure.or.kr/index.do

Korea Tax Service https://unipass.customs.go.kr

OECDwww.oecd.org

UKEF (ECGD) https://www.gov.uk/topic/business-enterprise/export-finance

UNCTAD http://unctad.org.

Korea Offshore & Shipbuilding Association http://www.koshipa.or.kr/