HIGHER PROSPERITY

Hyundai Oilbank

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HIGHER PROSPERITY

现代Oilbank将通过不断的设备投资和稳步增长，
跻身于拥有世界顶级竞争力的综合性国际能源公司。

2018年，现代Oilbank通过不断的设备投资，首次在韩国同行业实现了40%的尖端化率，旗下子公司通过业务多元化实现了持续、稳步增长，成为本公司跻身于综合性国际能源公司的原动力。

同时，作为受尊敬的企业，全体员工捐赠1%工资等，开展了分享和志愿活动，通过建设安全的工作环境，实现了1300万工时零事故纪录。

现代Oilbank将以不断的努力、投资和发展性变化为基础，继续以拥有世界顶级竞争力的综合性国际能源公司为目标阔步前进。

GOING HIGHER

FY2014	FY2015	FY2016	FY2017	**FY2018**
Higher Reliability	Higher Efficiency	Higher Progress	Higher Performance	**Higher Prosperity**

INTRODUCTION

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2018年主要成果

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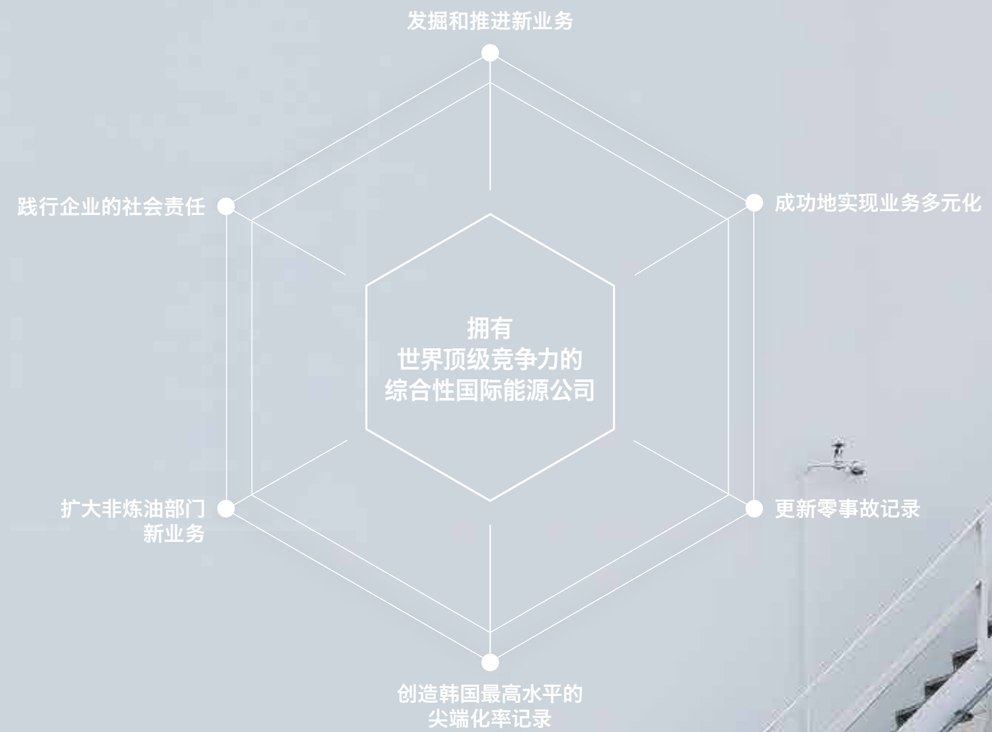
公司愿景



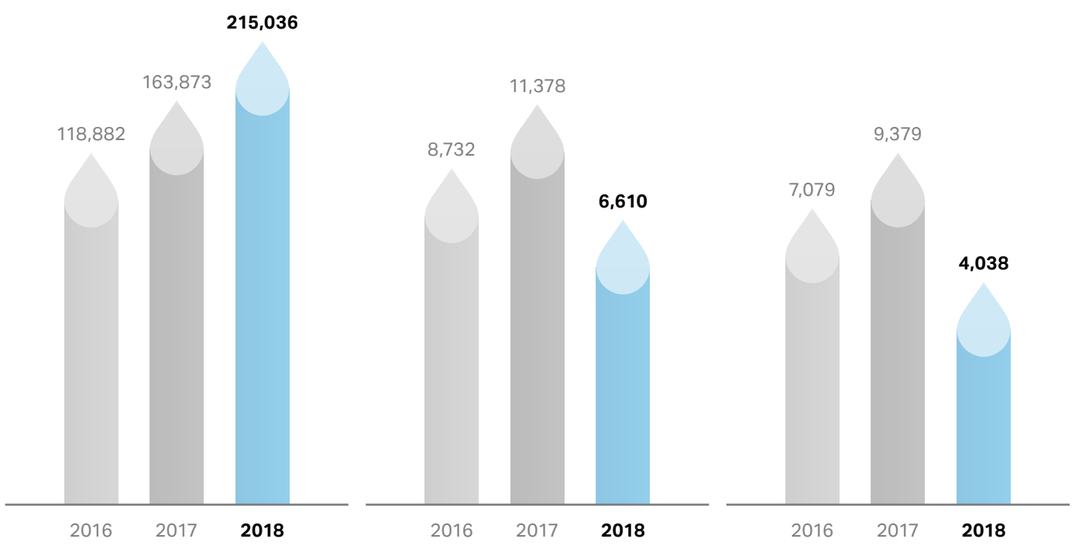
主要财务成果

2018年，现代Oilbank凭借韩国最高水平的尖端化设备、持续推进原油进口渠道多样化、成功地实现业务多元化等，继续创造了稳定的业务成果。

经营成果

(单位：亿韩元)

销售收入	营业利润	本期净利润
215,036	6,610	4,038



※ 以韩国国际会计准则(K-IFRS)及合并财务报表为准

财务状态

(单位：亿韩元)

	2016	2017	2018
资产总计	94,087	109,413	117,448
负债总计	49,733	58,794	66,207
所有者权益合计	44,354	50,619	51,241

稳定性指标

(单位：%)

	2016	2017	2018
流动比率	98.2	108.1	95.2
产权比率	112.1	116.1	129.2
利息保障倍数	15.5倍	14.7倍	7.2倍

信用等级

公司债务

AA-

韩国企业评价、韩国信用评价、NICE信用评价

企业票据

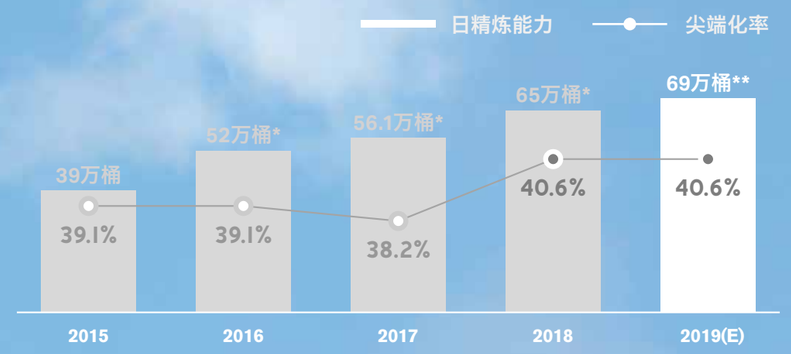
A1

韩国企业评价、韩国信用评价、NICE信用评价

※ 以2018年年底为准

Competitiveness

韩国最高水平的尖端化率



* 含现代化学凝析油分馏产品13万桶
**含2019年现代化学凝析油分馏产品17万桶(增产计划)

原油进口渠道多样化

	2012	2015	2018
中东产原油进口占比	91%	82%	54%
进口国家数*	13个国	20个国	21个国
进口油种数*	21个	39个	52个

* 自2012年后累计进口油种数/国家数

通过完成尖端化设备扩建、实现原油进口渠道多样化等，不断提高综合性国际能源公司的竞争力。

现代Oilbank通过建成新的溶剂脱沥青(SDA)装置和尖端化设备，在韩国同行业创造了尖端化率的新纪录40.6%，并计划以此为基础扩大高附加值产品生产。另外，在国际油价变动及国内外政策难以捉摸的艰难状况下，本公司依然通过原油进口渠道多样化及扩大出口市场等不断加强竞争力，依然保持着稳步增长势头。

Diversification

2018年子公司财务状况

(单位: 亿韩元)

	销售收入	营业利润
现代化学	41,526	387
现代Shell Base Oil	7,320	658
现代Cosmo	29,893	1,681
现代OCI	1,361	148
现代油品码头	393	107

扩大非炼油部门营业利润

* 以合并财务报表为准
* 炼油业务以现代Oilbank的个别财务报表的营业利润为准计算, 非炼油业务因现代Oilbank的合并财务报表和个别财务报表的营业利润存在差异而分别计算。

凭借成功地实现业务多元化和扩大非炼油部门的新业务, 实现持续、稳步增长。

现代Oilbank以扩大非炼油部门的新业务为目标推进了业务多元化, 并在市场上实现了软着陆, 创造了令人刮目相看的经营业绩。截至2018年, 本公司将非炼油部门营业利润的占比提高至13%, 并计划到2022年将占比提高至45%。

Momentum

石化新业务HPC项目

投资金额

2.7万亿韩元

工厂占地面积	投入商业生产
50万平米	**2021**年

聚乙烯预计年产能	聚丙烯预计年产能
75万吨	**40**万吨

通过不断发掘新业务和业务合作来改善生产装置，奠定增长基础。

2018年5月，现代Oilbank与LOTTE Chemical就联合开展石化业务(HPC)签订了投资协议书。以2021年投产为目标正在推进的HPC项目是一个投资额超过2.7万亿韩元的超大型石化新业务。他位于大山工厂园区内，占地50万平米，HPC工厂也将建在此处。当工厂投入商业生产后，每年可生产75万吨聚乙烯和40万吨聚丙烯，将为本公司大幅度改善收益率作出巨大贡献。

Safety

大山工厂创造“1300万工时零事故”纪录

13,802,356 工时

(以2018年12月月底为准)

(单位: 工时)

在韩国炼油公司中首次创造了“1300万工时零事故”纪录。

从2013年10月起，到2018年9月为止，现代Oilbank没有发生过一起安全事故，实现了“1300万工时零事故”纪录，开创了韩国炼油行业先河。直至现在，这一零事故纪录仍然在延续着。今后，现代Oilbank将继续致力于把大山工厂打造成韩国领先的安全工作场所。

Sustainability

现代Oilbank分享1%基金

分享1%工资

从2012年1月起每年
员工每月分享1%工资

员工每年参加志愿活动时数

5,772 小时

分享1%基金捐款总额

104.7 亿韩元

(2011.12~2018.12累计额)

通过分享1%工资和志愿活动的小小实践来创造更美好的世界。

现代Oilbank及其子公司的员工自发地捐赠工资的1%，亲自到需要关爱的地方，每年开展超过5000小时的志愿活动等，为传播分享文化发挥了模范带头作用。另外，现代Oilbank正在扩大面向最不发达国家的援助事业等，积极在国内外实践分享经营。今后，现代Oilbank将通过各种社会奉献活动来履行企业的社会责任。

代表董事致辞

"尽管我们在2018年经历了艰难的经营状况,
但依然在充实企业内涵方面创造了优异成绩, 而且超越了规模比我们大的竞争公司。
这归功于我们为实现业务组合多元化和提高炼油业务效率化所作出的不懈努力。
今后, 我们将以安全与环保为本经营工厂, 并以此为基础不断创造利润,
履行企业应尽的社会责任和作用, 与社区弱势群体共享希望、携手前进。"

各位股东及客户, 大家好!
我谨代表全体员工向大家介绍现代Oilbank在2018年取得的经营成果和本年度的计划。

2018年, 以合并财务报表为准, 现代Oilbank实现销售收入21.5036万亿韩元、营业利润6610亿韩元。虽然, 销售收入同比增长了约30%, 但是, 营业利润却下降了约40%。这主要是第四季度油价下跌导致与库存有关的损失及精炼利差恶化所致。

现代Oilbank以合并财务报表为准的营业利润与其他炼油公司有所不同, 没有包括芳香烃和基础油业务的业绩。2018年, 开展芳香烃业务和基础油业务的现代Cosmo和现代Shell Base Oil分别创造了1681亿韩元和658亿韩元的营业利润。但因两家公司受共同治理结构的约束, 他们的业绩未能包括在本公司的合并财务报表, 若将两家公司的营业利润与本公司的营业利润相加的话, 则本公司的营业利润合计将达到8949亿韩元。

尽管本公司经历了艰难的经营状况, 但依然在充实企业内涵方面创造了优异成绩, 而且超越了规模比我们大的竞争公司。这归功于我们为实现业务组合多元化和提高炼油业务效率化所作出的不懈努力。今年, 我们将继续在这方面作出努力。

现代Oilbank正以2021年竣工投产为目标, 推进HPC(Heavy Feed Petrochemical Complex)项目, 他是可划时代地提高石化部门竞争力, 投资规模达到2.7万亿韩元的超大型业务。若该项目获得成功, 本公司将跻身于综合炼油/石化公司, 希望全体员工全力以赴地提供支持。我们正在申请公有水面填海造地许可, 并计划发掘我们在那里可以做的新业务。

随着溶剂脱沥青(SDA, Solvent De-Asphalting)装置竣工后, 我们正在扩建尖端化设备, 并开启超尖端化时代。随着扩大超重质油的投入比例, 最大程度地减少低附加值重质油的产出, 预计炼油部门的效率性将进一步提高。尤其, 随着国际海事组织(IMO)从2020年起实施更严格的规制, 预计低硫船舶燃料的需求有望稳步增加。为此, 我们将通过扩大韩国内油品码头业务和利用海外法人的优势等, 积极扩大海上加油市场的市场份额。

今年, 我们将继续以安全与环保为本经营工厂, 并以此为基础不断创造利润, 履行企业应尽的社会责任和作用, 与社区弱势群体共享希望、携手前进。请各位股东及客户继续关心和支持现代Oilbank, 祝愿各位家庭幸福美满。

现代Oilbank代表董事兼社长
姜达镐

经营团队致辞

因可以预见的“世界经济萧条、消费趋势变化、全世界范围的石化设备扩建”，预计2019年的经营环境将不容乐观。但是，若考虑到我们拥有“行业最高水平的尖端化率、超重质油稳定处理技术、零事故稳定运转能力、持续进行新投资”等优势，则当前局势对我们来说可能会成为实现新飞跃的机会。

丁海元副社长
安全生产本部长

对安全生产本部来说，我们将集中一切力量专注于“安全创新和生产创新”，为公司实现新飞跃保驾护航。我们最优先考虑的核心力量“安全环保地运营工厂！实现安全创新！”是我们实现可持续增长的基础条件。我们分别于1988年和1996年竣工的第一工厂和第二工厂存在着潜在的安全隐患，我们将继续推进安全诊断活动和预防性设备改善投资，以防止重大事故的发生，做到防患于未然。
“不停工地创造新收益！实现生产创新！”是实现未来增长的必要条件。我们将通过“保障高收益装置开工率的最大化、改善工厂效率、节约能源”等措施，持续推进生产创新活动，确保最强的制造竞争力的同时，致力于发掘新业务，开辟全新的业务领域。

世界未来学家阿尔文·托夫勒曾说过：“变化不是生活所必需的，而应是生活本身！”，他以此强调了变化与创新的重要性。变化创新的时期总是会与痛苦和困难相伴。只有克服痛苦和困难时，“我们的公司，我们的工厂”才可能会拥有“比现在更好的现在”。为此，我们要建立“彼此信任！工作自豪感！称赞与鼓励！”的组织文化。我们将打造一个从一开始就共同参与的“共同助威、共同努力、共同喜悦的大山工厂”。

最近，韩国石油市场受到来自国内外的影响，使企业面临艰难的经营环境。受持续的经济萧条的影响，继轻质油内需市场的需求在2018年实现负增长后，预计今年将依然保持缓慢的下降趋势。

韩焕奎副社长
营业本部长

因人工费持续上涨和竞争不断加剧而导致企业经营环境不断恶化，加油站倒闭逐年增加，导致加油站数从2010年的1.3万个降至现在的1.1万个。
尽管经营环境如此艰难，营业本部仍将以“共同挑战、共同成长的营业本部”的口号为基础，为实现再次飞跃做好准备。2019年，我们将紧跟扩大产能、进军石化工业等公司扩大企业外延的步伐，把今年作为扩大企业外延的元年，奋力向前迈进。
我们将集中力量致力于开发新的优质加油站，扩大市场份额，提高品牌价值，实施以客户为本的营销战略，为现有加油站实现质的增长提供支持。

我们将通过构建迅速销售各种副产品的流程，为工厂实现稳定运行提供支持的同时，对已成为营业本部“摇钱树”的润滑油业务，我们将快马加鞭，使之百尺竿头更进一步。
另外，我们将前瞻性地应对迅速变化的未来。2018年，我们在炼油公司中最先引进了综合能源加注站，以应客户对氢、电等新能源的需求。今年，除了扩大综合能源加注站外，我们还计划积极推进应用加油站空间和共享经济的多种新业务。
着眼于内部，我们将引进积极的奖励制度，对努力工作的员工进行奖励，并为全体员工营造能够幸福、快乐地工作的工作环境。

2019年，随着美国增产页岩油，欧佩克与俄罗斯以控制油价为目的调整原油产量，国际油价的不确定性将进一步扩大。预计世界炼油行业设备新建将同比增长55%，日产能将增至190万桶，这将导致精炼利差恶化。

朱荣敏副社长
全球业务本部长

全球业务本部将通过减少占全公司成本93%的原油进口费用，提高成本经济性，实现占总产量的50%的出口产品销路的多样化，稳步提高收益率。
我们将积极进口美国产原油，将价格十分低廉的玛雅超重质油的购买比重扩大至30%，突破成本瓶颈。

2019年，炼油行业的设备新建集中在中国，中国产石油产品销往东南亚的出口量将增加，这将导致东南亚市场的收益率下降，我们将发掘中南美等国家市场，以替代收益率下降的东南亚市场，并将销往澳大利亚、新西兰、美国等经济性优良的发达国家市场的出口量增至50%。

五年来，现代Oilbank的精炼能力从每天的39万桶增至65万桶，增加到原来的近2倍，堪称收益率尺度的尖端化比率也随着SDA等尖端化装置竣工投产，在韩国同行业首次达到了40.6%。

宋明峻专务
企划室长

十年来，现代Oilbank的年均利润增长率达到了23%，这在韩国炼油公司中位列领先地位，作为工厂稳定性尺度的零事故指标也在韩国同行业首次突破了1300万工时，作为兼备收益率和稳定性的最佳炼油公司而享誉韩国同行业。
最近，主要石油公司都在跳脱“勘探-钻井-炼油”的典型业务结构，将业务领域扩展到石化领域。现代Oilbank也于去年决定进军石化领域，并以2021年竣工为目标，正在兴建石化联合工厂。
总投资额达到2.7万亿韩元的石化项目建成后，将使用本公司自主生产的有竞争力的原料，预计原料竞争力将远远超过以石脑油为原料的其他公司。通过该石化项目，预计现代Oilbank不仅能够大幅度地扩大收益率，还能将业务范围从石油产品和芳香烃产品，扩大到石化基础产品和聚合物产品领域，从而完成整个石油产品的垂直系列化。

2019年，预计全球经济增长将放缓，产油国间相互制约关系将加剧，炼油工业将经历变动幅度比较大的一个年份。现代Oilbank将以迄今为止积累的业务竞争力为基础，积极应对市场环境变化的同时，通过扩大炼油业务的收益率和进军石化业务领域等，继续为推动公司的增长而不断努力。

董事会

现代Oilbank致力于提高经营的透明度和效率性，以加强董事会的作用和地位，不辜负所有利益相关者的期待。

现代Oilbank致力于加强位居其中心地位的董事会的作用和地位，以建设透明的公司治理结构。本公司积极响应各位股东、员工及客户等所有利益相关者的期待，为提高企业价值提供支援。

董事会的作用和组成

董事会存在的意义在于通过对整个经营领域作出战略性决策，提出建议，实施审计等，确保经营透明度，不断提高企业价值。为履行这些职能，董事会负责选聘代表董事并赋予权限，监督经营团队业务执行状况、回应咨询及提出意见。现代Oilbank通过董事会活动，同时追求经营的透明度和效率性，致力于提高股东和投资者等市场的信任。

现代Oilbank董事会根据公司章程和董事会规定，由股东大会选聘的两名公司执行董事、三名独立董事等共五名董事组成，董事会主席由代表董事担任。董事会作为与执行公司业务有关的决策机构，针对财务结构的改善、主要投资业务的决定及其他经营事项等与公司经营活动相关的主要事项，通过自由、深入讨论进行审查和作出议决。

董事会组成

代表董事	姜达镐	• 现代Oilbank代表董事(2018~现在)
执行董事	权五甲	• 现代重工业控股公司代表董事兼副会长(2018~现在) • 现代重工业执行董事(2014~现在)
独立董事	尹增铉	• 尹经济研究所所长(2011~现在) • 韩国企划财政部部长(2009~2011) • 韩国金融委员会委员长/韩国金融监督院院长(2004~2007)
	李圭用	• 金&张法律事务所顾问(2008~现在) • 韩国环境部部长(2007~2008) • 韩国环境部副部长(2006~2007)
	金甲猷	• 法务法人(有限)太平洋律师(1996~现在) • 国际商业会议所仲裁法院副院长(2014~现在) • 大韩商事仲裁院国际仲裁委员会委员长(2017~现在)

※ 以2018年年底为准

董事会下设委员会

为加强董事会的独立性、专业性和效率性，现代Oilbank在董事会内设立并运作独立董事候补推荐委员会、监事委员会和内部交易委员会等三个委员会。各委员会的组成和作用如下。

各委员会组成及作用

监事委员会	李圭用 尹增铉 金甲猷	• 公司的会计和业务审计 • 索取营业报告，调查公司财产状况 • 处理法令或章程规定的事项及董事会委任事项 • 审计人的选任、变更及解雇权
内部交易委员会	李圭用 尹增铉 金甲猷	• 审查和批准公正交易法上大宗内部交易
独立董事候补推荐委员会	姜达镐 尹增铉 金甲猷	• 推荐候补独立董事，提请股东大会选聘

※ 以2018年年底为准

2018年董事会活动

2018年，现代Oilbank董事会共举行九次董事会议，处理了多项主要经营案件。

2018年董事会主要议决事项

关于股东大会、董事会和治理结构	• 召集第54期定期股东大会和批准目的事项 • 选任代表董事 • 选任内部交易委员会等委员会委员 • 修订董事会规定
关于投资	• 批准石化新业务投资报告
关于会计及财务管理	• 批准第54期财务报表 • 批准第54期营业报告 • 根据条款批准与关联金融公司的金融交易额度(3次) • 批准关联公司间内部交易综合限额(4次)
其他主要经营事项	• 批准与现代重工业体育(株)签订的赞助合同 • 批准与(社)韩国职业足球联盟签订的赞助合同

主要发展历程

现代Oilbank成立于1964年，以韩国第一家民营炼油公司起步，2010年纳入现代重工业集团旗下。2018年，现代Oilbank迎来公司创立五十四周年，正为跻身综合性国际能源公司而持续进行创新和挑战。

1964-2000

1964. 11 成立韩国最早的民营炼油公司“极东石油工业(株)”
1969. 01 公司更名为“极东SHELL石油株式会社”
1977. 05 公司更名为“极东石油株式会社”
1978. 08 日产1万桶的原油精炼设施竣工
1988. 08 日产6万桶的常压蒸馏设备投产
1988. 11 公司更名为“极东炼油株式会社”
1989. 07 大山工厂竣工(获总统表彰)
1989. 11 日产10万桶的原油处理设施扩建业务获政府许可
1993. 07 公司更名为“现代炼油株式会社”
1994. 06 开发和引进“OILBANK”品牌
1996. 05 大山工厂日产20万桶原油精炼设施竣工
1998. 05 年产能40万吨的BTX工厂竣工
1999. 12 兼并韩华能源广场(株)

1964. 11
成立韩国最早的
民营炼油公司
“极东石油工业(株)”

1989. 07
大山工厂竣工
(获总统表彰)

2001-2010

2002. 04 公司更名为“现代Oilbank株式会社”
2004. 11 入选韩国劳动部评选的“新劳资文化先进企业”
2005. 11 清洁燃料(Clean Fuel)项目竣工
2006. 03 获韩国产业资源部评选的民营企业制造部门“最佳伦理经营企业”
2007. 01 被评为公平交易自觉遵守业务甲级单位
2008. 04 现代Oilbank与日本科斯莫石油签署涵盖整个炼油业务领域的战略合作协议
2008. 12 获大韩商工会议所主办的“第15届企业革新大奖”之国务总理奖
2009. 03 获“第七届韩国伦理经营大奖”之综合大奖
2009. 11 成立现代Cosmo
2009. 12 获贸易协会主办的贸易日“50亿美元出口塔奖”
2010. 06 获韩国经济杂志主办的“最佳工作单位”大奖
2010. 08 纳入现代重工业集团旗下
2010. 08 权五甲就任代表董事

1994. 06
开发和引进
“OILBANK”品牌

2011-2015

2011. 03 成立地区著名人士客户咨询团
2011. 09 第二尖端化设施投入商业生产
2011. 11 成立板桥中央技术研究院
2012. 02 成立现代油品码头
2012. 02 与壳牌开始基础油业务合作
2012. 02 创立现代Oilbank分享1%基金
2012. 04 成立现代Shell Base Oil
2012. 04 合作伙伴企业专用“同心馆”竣工
2012. 09 获“第一届韩国知识大奖”之总统奖
2012. 10 分别居KS-CQI全产业部门和KS-SQI炼油行业第一
2012. 12 权五甲代表董事获贸易日“银塔产业勋章”
2012. 12 获贸易协会主办的贸易日“80亿美元出口塔奖”
2013. 02 入选怡安翰威特(Aon Hewitt)评选的“韩国最佳职场”十大企业
2013. 02 现代Cosmo第二BTX工厂投入商业生产
2013. 07 与LOTTE Chemical签订MX制造业务谅解备忘录
2013. 09 进军润滑油行业，推出“XTeer”品牌
2013. 12 现代油品码头投入商业生产
2014. 01 直营加油站参与净利润分享1%捐赠活动
2014. 05 获能源管理体系(ISO50001)认证
2014. 05 成立现代化学
2014. 06 宣布创立50周年愿景
2014. 08 现代Shell Base Oil基础油工厂投入商业生产
2014. 09 文钟博就任代表董事
2014. 11 连续三年获KS-CQI第一
2014. 11 获“能源节约促进大会”颁发的国务总理奖
2014. 11 获“2014年劳资文化大奖”之总统奖
2014. 11 获“第13届韩国安全大奖”之总统奖
2014. 12 获“第21届企业革新大奖”之总统奖
2015. 02 获“第11届透明经营大奖”之大奖
2015. 06 获“2015年绿色经营大奖”之总统奖
2015. 11 获“2015年韩国用电安全大奖”

2016

2016. 02 现代OCI成立
2016. 05 员工公寓小区福利馆“同心馆”竣工
2016. 11 现代化学MX(混合二甲苯)工厂投入商业生产
2016. 12 文钟博代表董事获贸易日“金塔产业勋章”

2017

2017. 09 实现1000万工时零事故
2017. 10 现代OCI碳黑工厂竣工
2017. 11 越南河内国立图书馆内儿童图书馆开馆

2018

2018. 02 现代OCI碳黑工厂投入商业生产
2018. 05 与LOTTE Chemical签订烯烃新业务(HPC项目)投资协议书
2018. 05 举办梦想演唱会(DREAM CONCERT)
2018. 05 开始提供移动实验室(Mobile Lab)服务
2018. 07 韩国第一个综合能源加注站开业
2018. 08 溶剂脱沥青(SDA)装置竣工
2018. 09 实现1300万工时零事故
2018. 12 公司网页获2018年网站大奖之韩国品牌创新大获
2018. 12 姜达镐就任代表董事

2016. 05
员工公寓小区
福利馆
“同心馆”竣工

2016. 11
现代化学
MX(混合二甲苯)
工厂投入商业生产

2017. 09
实现1000万工时
零事故

2018. 08
溶剂脱沥青(SDA)
装置竣工

2018年热点话题

2018年，现代Oilbank通过5月共同推进石化新业务、8月开启超尖端化时代、12月开展员工参与的年底志愿活动等，提高业务竞争力的同时，忠实地履行企业社会责任。

三月

为尼泊尔僻壤山村新捐建一所中学

现代Oilbank的分享1%基金与严弘吉人类财团携手为尼泊尔廓尔喀地区新捐建了一所中学。这是继2013年在越南海南捐建幼儿园以来开展的第四个海外教育业务。廓尔喀地区是尼泊尔大地震的震中地区，学生们一直在临时建筑上上课。临时建筑由两座二层建筑组成，布置了12个教室，最多可容纳400多名学生。新捐建的建筑物可容纳学生数远远超过了临时建筑，并考虑了今后开设高中课程所需空间。

五月

与LOTTE Chemical携手推进石化新业务

现代Oilbank与LOTTE Chemical联合推进投资规模达2.7万亿韩元的超大型石化新业务。两家公司决定对双方现有的合资企业现代化学注资，在本公司大山工厂园区内开辟约50万平米地皮建设工厂。该厂建成后，有望通过炼油与石化间的协同效应，大幅度提高成本竞争力和强化产品组合。该厂计划于2021年年底投入商业生产，届时每年有望增加出口额3.8万亿韩元，实现营业利润6000亿韩元。

七月

韩国第一座综合能源加注站开业

现代Oilbank在韩国最先推出了综合能源加注站。在现有加油站和LPG加气站之间的闲置空间里，设置了氢气加气基础设施和电动汽车充电器。虽然以前也有同时销售传统燃料和替代燃料的加油站，但是在一个地方销售汽车用全部品种燃料尚属首创。综合能源加注站建在对扩建电动汽车、氢燃料电池汽车充电基础设施表现出积极态度的蔚山广域市，本公司计划以韩国大中城市为中心扩大综合能源加注站的建设。

八月

超尖端化时代的开幕

现代Oilbank为提高炼油效率，从2017年起推进了价值达8000亿韩元的项目，如今，其中的溶剂脱沥青(SDA，Solvent De-Asphalting)装置已竣工投产。本公司计划通过该装置从渣油中去除沥青质成分，提取脱沥青油(DAO，De-Asphalted Oil)，再作为尖端化设备的原料投入，以扩大高附加值产品的生产。本公司计划在9月底完成尖端化设备的扩建，届时将在韩国首次实现40%的尖端化率。

十月

与墨西哥签订汽油出口长期合同

根据合同，现代Oilbank将在2019年上半年向墨西哥国营石油公司P.M.I供应210万桶汽油。本公司没有通过中间的现货市场交易商，而是直接与墨西哥国营石油公司签订了汽油长期供货合同，这在韩国炼油公司中尚属首次。长期直接交易具有在一定条件下稳定地销售货物的优点。尤其，此次直接交易有望成为本公司今后扩大中南美出口市场的桥头堡，本公司将在2019年积极推进签订为期多年的供货合同。

十一月

向加油站管理人提供快速手册

现代Oilbank发行了《加油站快速手册》一书。这是为了让加油站的管理人能够快速、有效地应对各种状况，由公司营业本部直接制作的。手册共分三册，从加油站的开设到设施管理、运营和营销、安全环境管理要领等，涵盖了有关加油站运营的全部内容。手册应用示意图提高了使用者的理解度，并提高了便携性，弥补了以往指南手册存在的缺点，有望对加油站运营提供实质性的帮助。

十二月

员工参与的年底志愿活动

现代Oilbank的分享1%基金在辞旧迎新的年底，邀请参与分享1%工资的员工举行了“当一天圣诞驯鹿鲁道夫”聚会活动。这是为在寒冷的冬天访问供餐设施的老人组装100台步行器的活动。继首尔之后，大山总公司也为韩国低收入家庭的儿童开展了亲自制作贺卡和包装圣诞礼物的志愿活动。最后，员工们提着礼物亲自访问了地区儿童慈善中心，亲自为儿童举办了圣诞派对，圆满地结束了2018年年底志愿活动。

公司愿景

现代Oilbank计划通过稳定地运营炼油部门和扩大非炼油部门的业务来持续推进业务多元化战略，跻身于拥有世界顶级竞争力的综合性国际能源公司。

跻身于拥有世界顶级竞争力的综合性国际能源公司

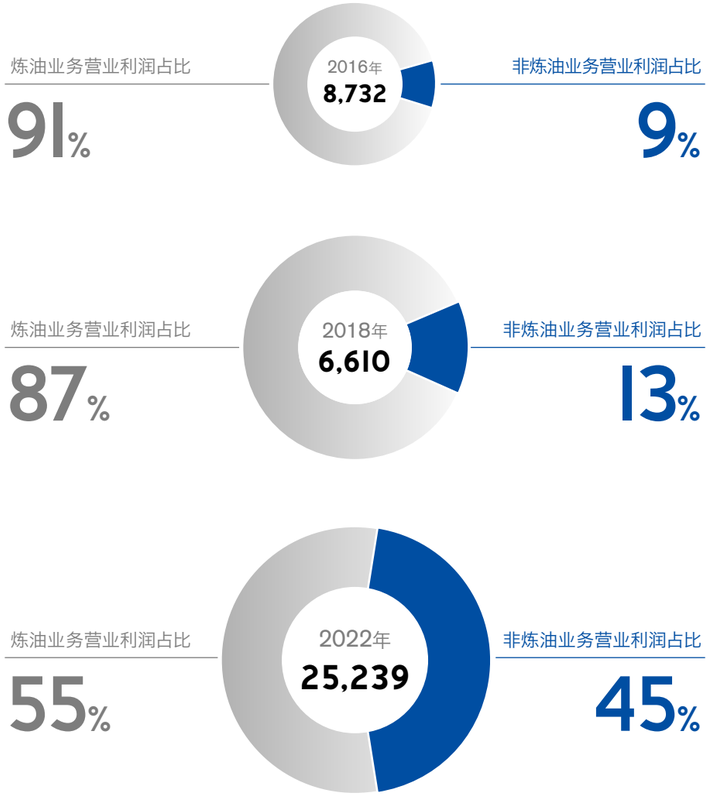
2018年9月，现代Oilbank在韩国同行业首次创造了1300万工时零事故纪录，并不断更新着零事故纪录。炼油厂发生的紧急停工或意外事故绝非单纯地造成经济损失那么简单，可能会成为决定公司生死存亡的威胁，因此，本公司把以安全与环保为本作为公司最重要的经营目标，稳定地运营着工厂。另外，本公司计划通过精炼设备和尖端化装置的大规模扩建，改善炼油业务收益率，除炼油部门以外，还将继续增强现有基础油、油类储藏、BTX、碳黑等业务力量的同时，并通过进军石化领域，开辟新业务，不断扩大非炼油业务的营业利润所占比重。

确保新增长动力，到2022年实现营业利润2.5万亿韩元

现代Oilbank将继续致力于强化炼油及非炼油部门的竞争力。为应对国际海事组织(IMO)实施更严格的燃油含硫量规制而带来的需求和利差的增加，本公司将继续扩大尖端化装置的规模，增加部分BTX业务的产能，提高设备竞争力。另外，为进军石脑油裂化设施(NCC)领域而正在推进的HPC项目，可通过投入脱硫重质油而确保领先的成本竞争力，而且还可通过炼油业务和石化业务间的协同效应，确保高于其他NCC的竞争优势。今后，随着HPC项目竣工投产，本公司计划到2022年将非炼油业务的营业利润占比增至45%，同时计划继续扩大相关业务，将非炼油业务的营业利润占比增至50%以上。

营业利润及其占比

营业利润(单位：亿韩元)



※ 以合并财务报表为准

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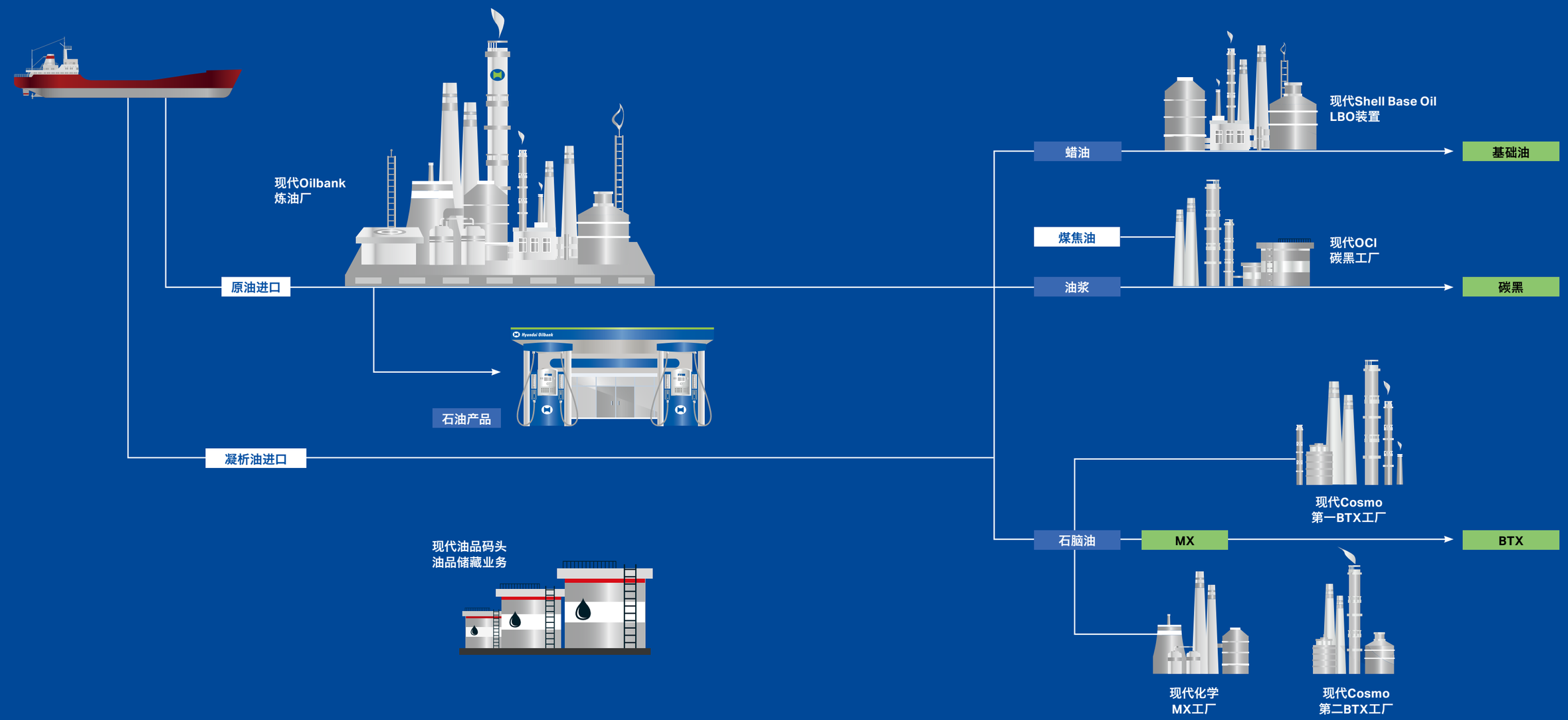
业务概览

凭借业务垂直系列化构筑稳定的增长基础。

现代Oilbank正通过能够创造协同效应的垂直系列化来促进业务多元化。现代化学的混合二甲苯(MX)工厂从2016年起投入商业生产，以现代Oilbank的原油精炼装置生产的石脑油和进口凝析油为原料，制造MX，再由现代Cosmo以MX和石脑油为原料生产BTX，完成了BTX(苯、甲苯、对二甲苯)业务的垂直系列化。

2014年，现代Oilbank与壳牌集团联手进军基础油领域，实现了从炼油到基础油的垂直系列化，以自主生产的基础油为原料，推出了高品质润滑油产品“XTeer”。另外，本公司与OCI合资成立了现代OCI，率先在韩国炼油公司中进军碳黑领域，并于2018年2月投入商业生产。本公司于去年决定进军石化领域，以2021年竣工为目标，正在建设石化联合工厂。通过石化业务，不仅可以大幅度扩大收益率，还可以将业务范围扩展到石化基础产品和聚合物产品领域，完成整个石油产品的垂直系列化。
现代Oilbank通过为扩大业务领域及实现垂直系列化所作出的努力，既提高了业务效率，又不断夯实了稳定的增长基础。



炼油业务

**现代Oilbank拥有日产能为65万桶的原油精炼能力，在韩国轻质油内销市场保持着21.6%的市场份额。
本公司正通过原油进口渠道多样化及扩大出口市场等，不断强化业务竞争力，
以综合性国际能源公司为目标阔步前进。**

实现原油进口渠道多样化

现代Oilbank在2018年受美国及中亚原油产量增加和制裁伊朗的影响，继续保持了扩大进口非洲和中东产原油的基调。2018年第四季度，应用溶剂脱沥青(SDA)装置竣工投产后增加的运转容量，增加了价格低廉的墨西哥产原油的进口，并扩大了从美国、英国、哈萨克斯坦等国的原油进口。

提高品牌形象

2018年，现代Oilbank继续开展了加油站促销活动，尤其，秋季新米促销活动在粮食政策方面建立的功劳得到政府认可，获得了韩国农林畜产食品部部长的表彰。另外，本公司正通过在韩国建成第一座可以给电动汽车和氢燃料电池汽车充电的综合能源加注站，与易买得24合作开发加油站综合业务模式，与首尔市签订谅解备忘录利用加油站空间提供女性放心快递服务等，不断扩大加油站平台。

此外，根据近来人们越来越熟悉智能手机的这一环境变化，扩大了移动加油优惠券的使用范围，不断更新应用程序等，开展了与客户友好的营销活动。通过在以司机为中心的广播媒体播放品牌广告，不仅塑造了亲切的公司形象，还同时提高了客户对公司品牌的认知度和喜好度。

强化加油站服务及质量

2018年，为了强化加油站服务，现代Oilbank以新开业的加油站、充电站为对象，开展了帮助他们早期步入正常轨道的“蜜月计划”，以及向加油客户免费提供新鲜咖啡的“咖啡师上门服务”，通过运营服务学院、市场设计师(MD, Market Designer)组织，为加油站管理人提供服务培训和支持。另外，本公司为强化质量管理而推出的自主质量检验系统“移动实验室”，获得了数码朝鲜日报评选的本年度热门商品大奖和石油产品质量管理领域韩国产业通商部部长表彰。不仅如此，本公司为了提高物流业务的稳定性，以全国物流中心为对象，加强特别安全检查，对直营加油站服务进行监督等，为打造让客户放心加油的加油站作出了不懈努力。

实现产品规格多样化和扩大出口市场

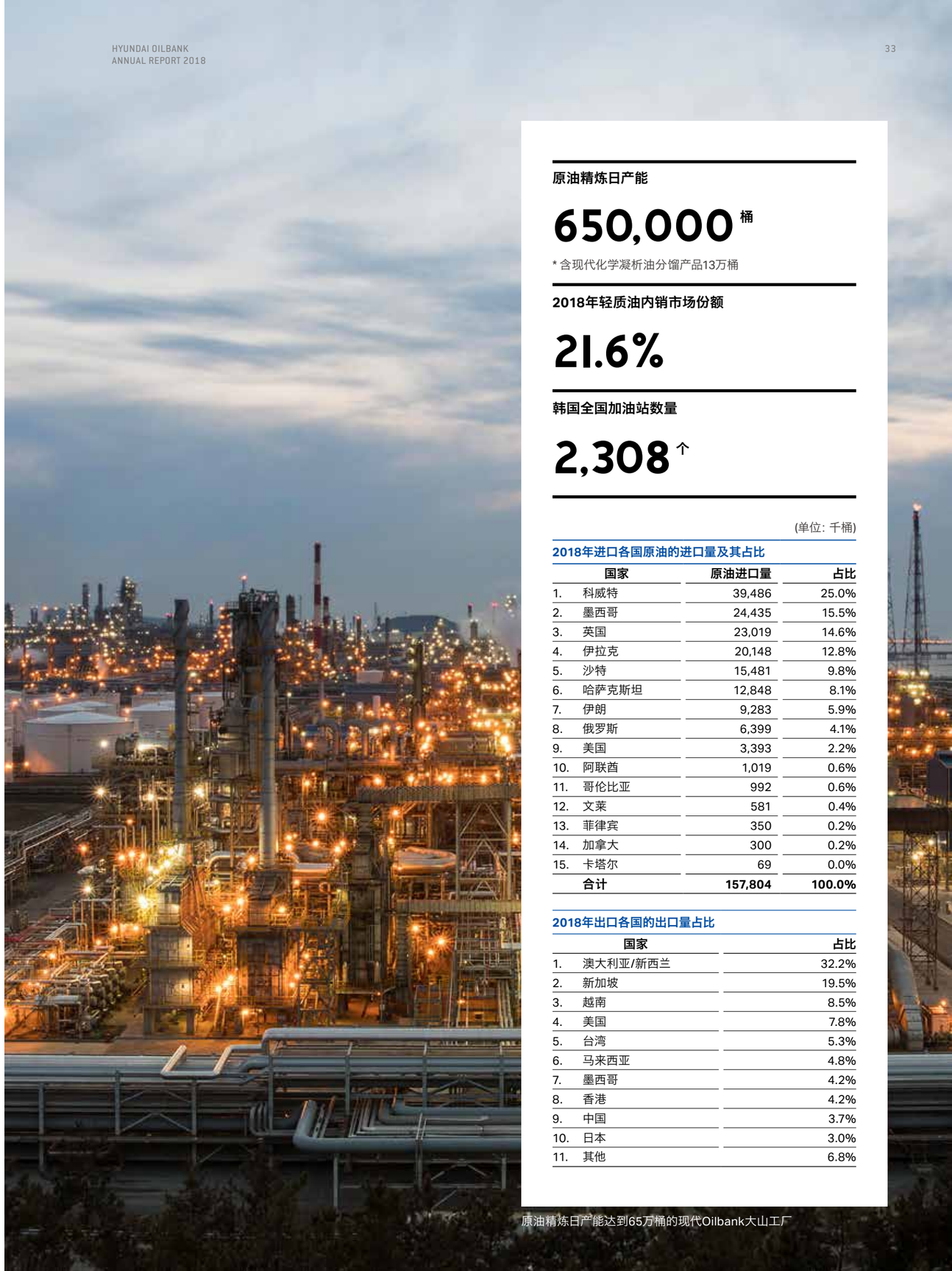
2018年，现代Oilbank出口了9713万桶石油产品。本公司以出口产品规格多样化、高档化及扩大新加坡海上柴油零售市场销量等为基础，与2017年相比，扩大了对澳大利亚、新西兰、新加坡市场的出口比重。同时，本公司为确保替代市场，扩大了中南美出口市场，与墨西哥国营公司P.M.I签订了汽油长期供应合同。今后，本公司将继续扩大高附加值产品的出口比重，同时，运用海外法人和分公司网络，积极进军高收益率新市场。

扩大润滑油业务

为扩大润滑油生产能力，现代Oilbank于2018年下半年在大山工厂内建成了配备最新设备的润滑油工厂，得以生产更优质的润滑油产品。与此同时，润滑油研究所构建了最新型发动机动力系统设备，积极与汽车制造商携手，开展发动机机油共同研究等，开发汽车、造船、船舶及发电用大型发动机、建设机械、变压器、机器人等领域使用的最优质的润滑油，包括现代重工业集团在内，获得了现代汽车、保时捷、奔驰、宝马、沃尔沃、MAN、雷诺等大型汽车制造商颁发的质量认证，去年5月在韩国首次推出了满足美国石油协会标准的最高规格SN+等级的润滑油。

2018年各产品销量 (单位：千桶)

油种	销量
柴油	65,023
石脑油	48,888
汽油	33,986
燃料油	20,636
航空煤油	16,009
煤油	4,703
LPG	4,053
其他	9,016
合计	**202,314**



原油精炼日产能达到65万桶的现代Oilbank大山工厂

原油精炼日产能

650,000桶

* 含现代化学凝析油分馏产品13万桶

2018年轻质油内销市场份额

21.6%

韩国全国加油站数量

2,308个

(单位：千桶)

2018年进口各国原油的进口量及其占比

	国家	原油进口量	占比
1.	科威特	39,486	25.0%
2.	墨西哥	24,435	15.5%
3.	英国	23,019	14.6%
4.	伊拉克	20,148	12.8%
5.	沙特	15,481	9.8%
6.	哈萨克斯坦	12,848	8.1%
7.	伊朗	9,283	5.9%
8.	俄罗斯	6,399	4.1%
9.	美国	3,393	2.2%
10.	阿联酋	1,019	0.6%
11.	哥伦比亚	992	0.6%
12.	文莱	581	0.4%
13.	菲律宾	350	0.2%
14.	加拿大	300	0.2%
15.	卡塔尔	69	0.0%
	合计	**157,804**	**100.0%**

2018年出口各国的出口量占比

	国家	占比
1.	澳大利亚/新西兰	32.2%
2.	新加坡	19.5%
3.	越南	8.5%
4.	美国	7.8%
5.	台湾	5.3%
6.	马来西亚	4.8%
7.	墨西哥	4.2%
8.	香港	4.2%
9.	中国	3.7%
10.	日本	3.0%
11.	其他	6.8%

石化业务

**现代Oilbank与日本科斯莫石油合资成立了现代Cosmo，
将业务范围扩大到石化领域。**

现代Cosmo

现代Cosmo成立于2009年11月，是由现代Oilbank和日本科斯莫石油合资成立的石化公司，生产和供应BTX(苯、甲苯、对二甲苯)等石化产品，BTX作为合成纤维或各种塑料等石化产品的基础原料使用。2013年2月，现代Cosmo的第二BTX工厂竣工投产，从而具备了年产能为164万吨的BTX生产设备，以此积极应对以中国、印度等亚洲国家为中心迅速增长的石化产品的需求并提高了收益率。

2018年，现代Cosmo通过改善装置、降低成本和扩大PX产量，创造了销售收入2.9893万亿韩元、营业利润1681亿韩元。今后，现代Cosmo计划将以中国为主的出口渠道扩展到台湾、东南亚等地，继续致力于提高装置效率和扩大产量。

**现代Oilbank与LOTTE Chemical成立了韩国首家由炼油公司和石化公司联合成立的
合资法人现代化学，从2016年起开始精炼凝析油，生产MX(混合二甲苯)。**

现代化学

现代化学是由现代Oilbank和LOTTE Chemical以6比4的比例出资成立的韩国首家炼油公司与石化公司的合资法人，于2016年11月投入商业生产。

随着现代化学的成立，通过与现有工厂联合，现代Oilbank完成了从原油到石化业务的BTX业务的垂直系列化。另外，现代化学生产的产品和副产品销售给股东公司现代Oilbank和LOTTE Chemical，凭借原料进口替代效果和扩大出口效果等创造着协同效应。

目前，现代化学处理凝析油的日产能约为13万桶，混合二甲苯、轻质石脑油等石化产品的年产能约为270万吨，航空煤油、柴油等石油产品的年产能约为2100万桶。今后，现代化学将通过工厂的安全、高效运行，探索可创造稳定的收益基础和扩大石化业务多元化的方案。2019年，现代化学将通过设施改造，把凝析油的日产能从13万桶增至17万桶，将MX的年产能从120万吨增至140万吨。另外，现代Oilbank正以2021年投入商业生产为目标，推进总投资额达到2.7万亿韩元的HPC项目，该项目建成后将利用本公司炼油装置的副产品生产聚乙烯、聚丙烯等石化产品，本公司将通过这些努力跻身于拥有世界顶级竞争力的综合性国际能源公司。

基础油业务

**现代Oilbank与壳牌集团合资成立的现代Shell Base Oil，从2014年起生产和销售环保基础油。
基础油业务通过在市场实现软着陆和扩大收益率，建立了成为韩国同行业标杆的业务多元化模式。**

※ 现代Shell Base Oil基础油工厂 I www.hsbaseoil.com

现代Shell Base Oil

现代Shell Base Oil是现代Oilbank与壳牌集团联合成立的合资公司，在大山工厂内建成了年产能为80万吨的基础油工厂，从2014年起投入商业生产。现代Shell Base Oil以现代Oilbank的尖端化装置产出的渣油为原料，生产符合美国石油协会(API)标准的Group Ⅱ 70 Neutral、Group Ⅱ 150 Neutral、Group Ⅱ 500 Neutral等基础油，供应给国内外生产企业和润滑油成品制造工厂。现代Shell Base Oil的高品质基础油，具有卓越的低温流动性、清澈的颜色、低挥发性、热稳定性以及可改善设备的燃油效率等多种优点，广泛应用于全世界的汽车发动机油、工业用油、海上船舶用油、工艺用油等领域。

从2015年起，现代Shell Base Oil在基础油市场实现了软着陆，通过提高收率、加强营销能力等，不断扩大收益率。另外，该公司生产的高品质基础油，销往以亚洲(韩国、中国、印度)、美洲和大洋洲等为中心的保持飞跃增长的基础油市场，2018年共向30多个国家出口了基础油产品。该公司通过扩大销售地区和渠道，不断改善销售利润的同时，通过开发100N、2CST等新产品，正在创造更多的额外利润。另外，该公司正通过于2018年9月完工的增加产能业务，确保了100万吨年产能，不断扩大销售收入。

油品码头业务

**现代Oilbank通过成立子公司现代油品码头，在韩国炼油公司中最先进军商业用油罐码头领域。
现代油品码头正以韩国东南部地区最大的油类物流基地为目标阔步前进。**

※ 现代油品码头全景 | www.oilterminal.co.kr

现代油品码头

现代油品码头是现代Oilbank持有100%股份的独资子公司，自2013年12月起在蔚山地区成功地经营商业用油罐码头业务。该公司在蔚山新港围海开垦区(约8.6万平米)内拥有可停泊5万吨级(以DWT为准)船舶的码头设施和可储藏28万千升的石油及石化产品的大型油类储藏设施。

自2014年起受托经营现代Oilbank所有并分布韩国各地的7个储油站，现已成长为经营网络分布全国的油品码头公司。2018年，创造了销售收入393亿韩元和营业利润107亿韩元，创造了自成立以来的最大业绩。

今后，现代油品码头计划通过收购或扩建国内外商业码头来扩建储藏设施，同时积极开发和推进相关业务，力争在数年内跻身于韩国首屈一指的油类物流专业公司。

碳黑业务

**2016年2月，现代Oilbank与OCI合资成立了现代OCI，
在韩国炼油行业最先打入碳黑业务领域，进一步加强了业务组合。**

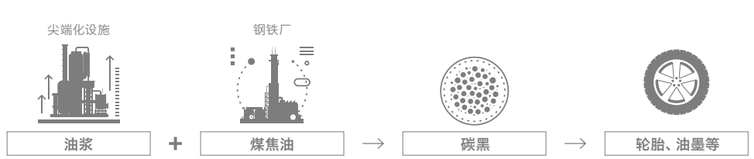
现代OCI

现代OCI是现代Oilbank为推进碳黑业务于2016年2月和韩国最大的碳黑生产商OCI联合成立的合资法人。碳黑是以炼铁厂的副产品煤焦油和炼油公司尖端化装置(RFCC)的副产品油浆为原料制造的碳粉，主要作为提高轮胎、橡胶等产品强度的配料和打印机墨粉的原料等使用。

2016年8月，现代OCI在与现代Oilbank的大山工厂比邻的大山联合工厂工业业园区内，开始兴建碳黑工厂，年产能为10万吨规模的碳黑工厂于2017年10月竣工，经过三个月的试运行，从2018年2月起投入商业生产。

现代OCI以稳定的原料供求体系和先进的碳黑技术为基础，尽管在艰难的经济条件下，依然于2018年实现销售收入1361亿韩元、营业利润148亿韩元，并计划截至2019年年底成功地完成目前正在推进的5万吨设备扩建业务，将年产能增至15万吨，跨越韩国市场，跻身于世界顶级碳黑企业。

碳黑业务系统



新业务推进状况

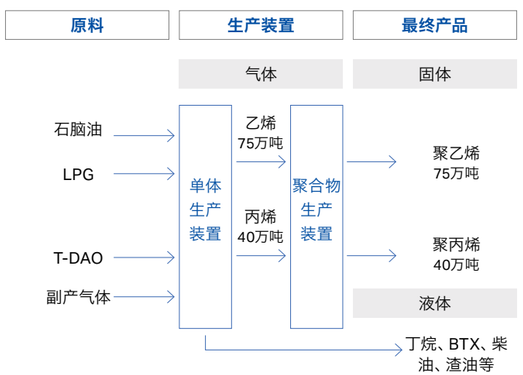
**现代Oilbank拥有韩国同行业最高水平的精炼设施，正通过不断的设备投资，
扩大非炼油部门的新业务，致力于打造稳定的收益结构，以在突如其来的业务环境变化中立于不败之地。**

现代Oilbank与各领域有竞争力的合作伙伴携手通过BTX业务(现代Cosmo)、混合二甲苯业务(现代化学)、基础油业务(现代Shell Base Oil)、碳黑业务(现代OCI)成功地开展了业务多元化，同时，2018年5月现代Oilbank和LOTTE Chemical就联合开展石化新业务签订了投资协议书。两家公司正在大山工厂园区内推进石化工厂建设项目，该厂以比石脑油更低廉的脱硫重质油、副产气体、LPG等炼油厂超过60%的副产品为原料，生产聚乙烯等产品。该厂预计于2021年年底投入商业生产，建成后每年可生产75万吨聚乙烯和40万吨聚丙烯，因以炼油厂的副产品为原料，成本竞争力高于他公司，有望大幅度地改善本公司的收益率。今后，现代Oilbank将以该新石化业务为基础，致力于扩大石化业务和开发新业务。

最近，随着扩大新再生能源、扩大和普及电动汽车和氢燃料电池汽车等政府政策的陆续出台，使能源工业环境正在发生着变化。

现代Oilbank作为一家综合性国际能源公司，理应积极响应政府的这些政策号召，为建设环保社会做出贡献。因此，今后不仅要提高现有炼油和石化领域竞争力，还要积极推进环保新业务。

重质油裂化设施



主要生产设施

**现代Oilbank具备了韩国同行业最高水平的尖端精炼设施，
稳定地生产和供应石油产品、石化原材料及基础油，创造着高附加值。
另外，本公司通过持续改善生产装置，最大程度地减少了污染物排放，构建环保、安全的生产基地。**

现代Oilbank大山工厂

大山工厂位于韩国忠清南道瑞山，是承担现代Oilbank的原油精炼业务的核心基地。大山工厂占地约330万平米，具备了分别被誉为精炼装置之根基和地上油田的原油精炼设施和重质油裂化设施。截至2018年年底，精炼原油的日产能保持在65万桶，其中高附加值产品占40.6%。

现代Oilbank持续进行设备扩建和改造。继2013年第二BTX工厂投入商业生产、2014年基础油设施投入商业生产、2016年MX工厂投入商业生产后，又在 2018年，新建成了碳黑工厂、溶剂脱沥青(SDA)装置及完成了尖端化设施的扩建，正在将大山工厂打造成世界顶级水平的尖端生产基地。

主要生产设施

现代Oilbank总公司——大山工厂，由第一工厂、第二工厂、第一BTX工厂、第二BTX工厂、基础油生产设施、MX工厂、碳黑工厂等组成。

设施总产能 (单位: 千桶/日)

装置名称	第一工厂	第二工厂	第一BTX工厂	第二BTX工厂	MX工厂	碳黑工厂	合计
常压蒸馏装置(CDU)	160.0	360.0			130.0		**650.0**
减压蒸馏装置(VDU)	99.0						**99.0**
LPG分离设施(LER)	12.0	6.0			5.3		**23.3**
石脑油/Mogas*处理设施							
石脑油脱硫装置(NHT)	12.0	20.0			92.0		**124.0**
石脑油改质装置(PLT)	4.6	20.0			56.0		**80.6**
Mogas脱硫装置(MHT)		41.0					**41.0**
烷基化物生产装置(ALK)		21.0					**21.0**
Mogas的MEROX装置(MMX)		10.0					**10.0**
煤油/柴油处理设施							
煤油脱硫装置(KHT)		60.0					**60.0**
柴油脱硫装置(GHT)	22.0	115.0			18.0		**155.0**
煤油MEROX装置 (KMX)	22.0				31.0		**53.0**
重质油脱硫/裂化设施							
加氢裂化装置(HCR)	50.0						**50.0**
延迟焦化装置(DCU)	50.0						**50.0**
常压渣油加氢脱硫装置(ARDS*)		50.0					**50.0**
缓和加氢裂化装置(MHC*)		25.0					**25.0**
重质油流化催化裂化装置(RFCC)		86.0					**86.0**
LBO生产设施							
基础油生产装置(LBO)	25.0						**25.0**
BTX装置 (千吨/年)							
生产苯			144.0	75.0	370.0		**589.0**
生产对二甲苯			437.0	984.0			**1,421.0**
生产混合二甲苯					1,240.0		**1,240.0**
碳黑生产设备(千吨/年)							
生产碳黑						100	**100**

* Mogas: 车用汽油(Motor gasoline)的缩写，系汽油配方材料的一种
* 将现有ARDS装置分别改造成ARDS模式和MHC模式的脱硫设施/裂化设施

常压蒸馏装置(CDU, Crude Distillation Unit)
根据沸点差异分离出各种石油产品的装置，按照沸点依次产出LPG、石脑油、煤油、柴油、燃料油等产品。

减压蒸馏装置(VDU, Vacuum Distillation Unit)
在低于常压的压力下，从减压蒸馏塔的顶端，按照沸点依次产出减压轻质柴油、减压重质柴油及减压燃料油。

加氢裂化装置(HCR, Hydro Cracking Unit)
对减压蒸馏塔生产的低附加值减压重质柴油进行裂化，生产优质煤油、柴油、LPG和石脑油等高附加值的轻质油。

延迟焦化装置(DCU, Delayed Coking Unit)
在490˚C高温下，对常压及减压蒸馏产品进行裂化，生产轻质馏分和副产品焦炭的装置。焦炭则作为锅炉燃料使用。

石脑油脱硫装置(NHT, Naphtha Hydro Treating)
对常压蒸馏装置生产的石脑油，加氢消除杂质，转化为低硫石脑油的装置。低硫石脑油投入石脑油改质装置，或作为各种产品的配料使用。

煤油脱硫装置(KHT, Kerosene Hydro Treating)
对常压蒸馏装置产出的煤油，加氢除硫，转化为低硫煤油的装置。低硫煤油作为锅炉煤油销售。

柴油脱硫装置(GHT, Gasoil Hydro Treating)
对常压蒸馏装置及延迟焦化装置产出的柴油，加氢除硫的装置。生产的低硫柴油作为各种产品的配料使用。

石脑油改质装置(PLT, Platforming)
将石脑油脱硫装置和延迟焦化装置产出的重质石脑油转化为芳香烃含量高的改质石脑油的装置。生产的改质石脑油作为汽油的配料或BTX的原料使用。

常压渣油加氢脱硫装置(ARDS, Atmospheric Residue De-Sulfurization)
以高硫常压渣油为原料，在高温、高压状态下，加氢转化为低硫渣油的装置，主要生产作为重质油流化催化裂化装置的原料使用的低硫渣油。

缓和加氢裂化装置(MHC, Mild Hydro Cracking Unit)
对渣油溶剂脱沥青装置产出的脱沥青油进行加氢裂化的装置，生产低硫柴油产品混合原料和重质油流化催化裂化装置的投入原料。

重质油流化催化裂化装置(RFCC, Residue Fluidized Catalytic Cracking)
以常压渣油加氢脱硫装置生产的低硫常压渣油和脱沥青油为原料，使用流化催化剂，在高温状态下进行裂化的装置，生产高附加值产品汽油、混合丁烷、丙烯及碳黑工厂的原料油浆等产品。

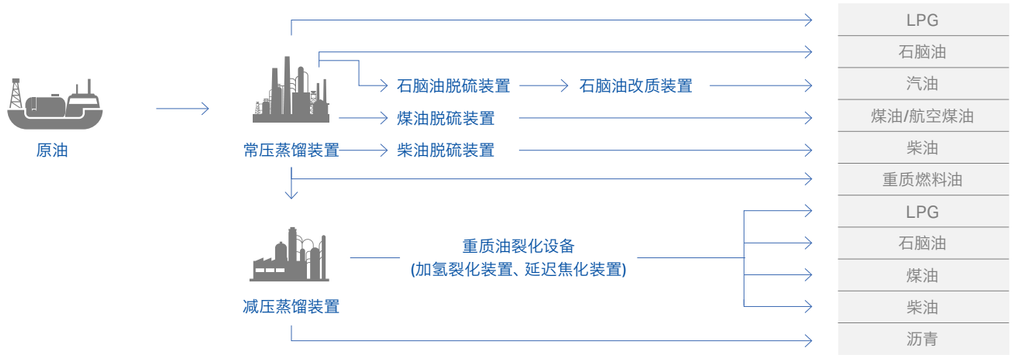
基础油生产装置(LBO, Lube Base Oil Unit)
以加氢裂化装置中未转化为煤油、柴油的蜡油(Hydrowax)为原料，使用催化剂，进行异构化反应和加氢反应的装置，生产优质基础油。

BTX装置(BTX, Benzene Toluene Xylene Unit)
应用催化反应和吸附方法，将石脑油改质装置生产的重质改质石脑油，转化为苯、甲苯、二甲苯等芳香烃碳化氢的装置。

碳黑装置
将碳化氢(重质油流化催化裂化装置生产的油浆、炼铁厂生产的煤焦油)通过不完全燃烧或热解来制造成碳黑的装置。

渣油溶剂脱沥青装置(SDA, Solvent De-Asphaltene Unit)
将溶剂混入常压渣油和减压渣油，分离出脱沥青油(De-Asphalted Oil)和沥青质(Asphaltene)的装置。

装置流程图



扩建尖端化设施

现代Oilbank通过提高尖端化设备的产能，生产环保高附加值产品。在炼油工业，尖端化设施被誉为地上油田。因为，通过尖端化设备可将精炼原油后剩下的约占40~50%的低价高硫重质油，转化成汽油、柴油、丙烯、烷基化物等高附加值环保轻质油。随着2011年9月第二尖端化设施竣工投产，尖端化设施的日产能从原来的7.85万桶增至16.45万桶，为在原油精炼领域实现新的飞跃发展奠定了基础。在尖端化率方面，现代Oilbank以40.6%位居韩国行业之首。尖端化率是指在总精炼能力中高附加值产品的产能占有的比重，是标志技术实力和收益能力的尺度。此外，现代Oilbank生产的石油产品质量满足了美国加利福尼亚州的含硫量标准(低于15ppm)，此标准是目前世界上最为严格的汽油和柴油产品标准，石油产品销往美国及澳大利亚等世界主要发达国家。

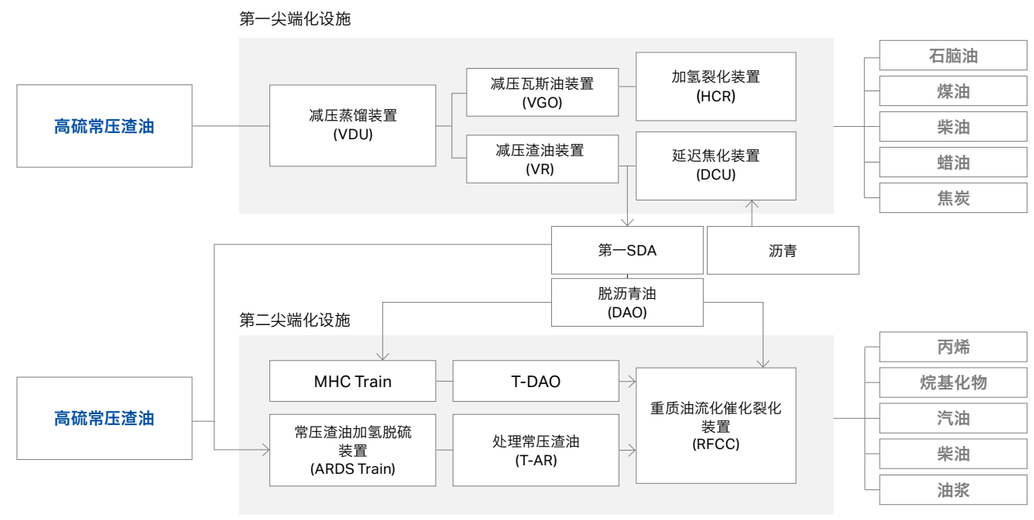
第一尖端化设施

尖端化设施是将常压蒸馏装置生产的燃料油裂化成高附加值石油产品的生产设备。现代Oilbank拥有第一尖端化设施和第二尖端化设施，其中，第一尖端化设施于1989年投入生产，以第一常压蒸馏装置生产的燃料油为原料，主要生产煤油和柴油。第一尖端化设施由加氢裂化装置和延迟焦化装置组成，日精炼产能分别为5万桶。

第二尖端化设施

第二尖端化设施是以第二常压蒸馏装置生产的低级燃料油为原料，生产LPG、汽油、柴油等石油产品和丙烯等石化原料的生产设备。第二尖端化设施由常压渣油加氢脱硫装置、加氢裂化装置和重质油流化催化裂化装置组成，以常压渣油加氢脱硫装置和加氢裂化装置产出的低硫重质燃料油为原料生产高附加值产品。从第二尖端化设施的日原油精炼规模看，常压渣油加氢脱硫装置、加氢裂化装置和燃料油流化催化裂化装置的日产能分别为5万桶、2.5万桶和8.6万桶。

尖端化设施装置流程图



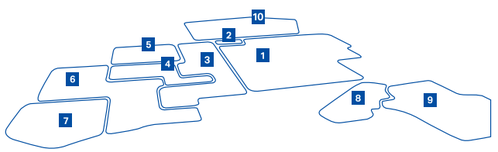
现代Cosmo BTX装置流程图

第一BTX装置流程图

第二BTX装置流程图

现代Shell Base Oil基础油装置流程图

现代化学凝析油/混合二甲苯装置流程图



1 第一装置 / 第一尖端化设施
2 基础油装置
3 第二装置
4 第一BTX装置
5 第二BTX装置
6 第二尖端化设施
7 混合二甲苯(MX)装置
8 现代大竹公园
9 碳黑装置
10 HPC项目(地皮)

主要产品

基础油
Lube Base Oil

石脑油
Naphtha

润滑油
Lubricants

航空煤油
Jet Fuel

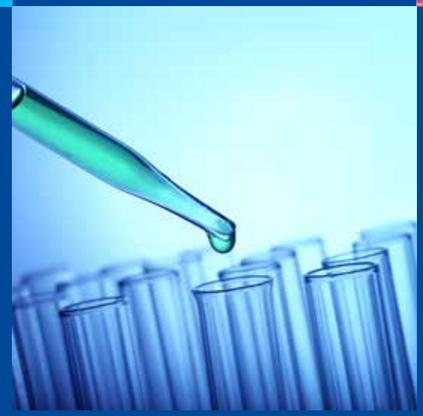
高级汽油
Premium Gasoline

碳黑
Carbon Black

BTX
Benzene, Toluene, P-Xylene

燃料油
Fuel Oil

丙烯
Propylene



烷基化物
Alkylate

LPG
(Liquefied Petroleum Gas)

主要产品

从汽车、船舶、飞机燃料到工业原料、家庭用燃料，现代Oilbank正通过生产和供应世界最优质的石油产品和石化原料，不断夯实现代工业和文明的基础。此外，还通过提供使日常生活更加便利的产品和服务，为开创更幸福、更美好的未来作出贡献。

石油产品

高级汽油(Premium Gasoline)
高级汽油是代表现代Oilbank的最高档产品，也是辛烷值高于98的高辛烷汽油。高级汽油作为提高燃料效率的添加剂使用，即使在长时间、严酷的驾驶环境下，也能保持强劲的发动机输出功率及燃料燃烧效率，同时也可大幅度地减少有害气体的排放，也属于环保高功能产品。

汽油(Gasoline)
汽油是在常温下挥发性强的混合液体，因易燃和与空气混合后容易发生爆炸，作为内燃机关的燃料广泛使用。现代Oilbank的汽油内还添加了发动机清洁剂，进一步提高了发动机内燃料的喷射能力和燃烧效率。此外，韩国政府的大气保护法限制苯不得超过体积的0.7%，硫磺的含量不得超过10毫克/公斤。现代Oilbank生产和供应的汽油，燃烧后产生的污染物含量远低于政府规定值。

超低硫柴油(Ultra Low Sulfur Diesel)
超低硫柴油大幅度改善了以往柴油的烟霾和噪音问题，在韩国堪称首创的环保型超低硫柴油。此产品含有高级柴油添加剂，具有清洁发动机的功能；从2006年起，所有柴油产品都混合了生物柴油，生产并供应更加环保的产品。进入冬季，根据不同的地区供应低温性状得到改善的优质柴油，以满足不同地区客户的需求。

煤油(Kerosene)
现代Oilbank生产的室内煤油，是获得环保标志的产品，没有刺激性气味，燃烧时几乎不产生烟气或烟灰，适合作为室内取暖燃料使用。发热量和燃烧性能非常优秀，是非常经济的产品。

燃料油(Fuel Oil)
主要作为内燃机和锅炉的燃料使用，根据含硫量、用途和粘度，燃料油可划分为低硫燃料油、船用燃料油、A燃料油、B燃料油和C燃料油。尤其，船用燃料油可根据发动机的大小、种类等，提供不同粘度的燃料油。

LPG(Liquefied Petroleum Gas)
丙烷(Propane)使用于家庭及商业中的烹饪和取暖等；丁烷(Butane)使用于汽车燃料、移动燃烧器或取暖燃料及工业燃料等。作为汽车燃料使用时，根据季节改变丁烷内丙烷的混合比率，供应发动性能得到增加的产品。出厂的所有LPG产品均添加添味剂，为保证客户安全使用而全力以赴。

航空煤油(Jet Fuel)
现代Oilbank生产的航空煤油，即使在低压和低温的高空，也能充分蒸发，不会发生蒸汽堵塞现象，不易结冻，确保良好的燃烧性能和发热量。现代Oilbank生产和供应军用JP-8和民用Jet A-1等产品。

石脑油(Naphtha)
石脑油广泛用于石化工业，既是生产汽油的原料，也是溶剂、石化产品和肥料工业的原料。现代Oilbank生产的石脑油作为烯烃含量低的优质产品，或销售给石化公司，或投入到现代Cosmo的BTX生产装置。

石化产品

BTX(苯、甲苯和对二甲苯)
BTX是芳香烃化工产品苯(B)、甲苯(T)、二甲苯(X)的英文字头的组合，是三种化工产品的简称，主要用于化工产品的合成。苯是芳香烃基础产品中最重要的化合物，作为尼龙、聚苯乙烯和保温材料等的原料使用，甲苯作为稀释剂等的合成原料使用，二甲苯作为聚酯、薄膜、PET等的原料使用。

丙烯(Propylene)
作为生产丙酮、异丙醇、丙烯腈、尼龙6、聚丙烯、环氧丙烷、环氧氯丙烷、聚异戊二烯等的石化核心原料，是生产亚克力、合成橡胶、塑料、洗涤剂等各种石化产品的基础。

烷基化物(Alkylate)
辛烷值高，不含可诱发大气污染的烯烃化合物，几乎不排放环境污染物，作为环保汽油配料使用。

混合二甲苯(MX, Mixed Xylene)
混合二甲苯用于生产对二甲苯、邻二甲苯和间二甲苯，也作为部分涂料和农药的溶剂等使用。

其他产品

沥青(Asphalt)
沥青是在减压蒸馏装置中生产的最后一种产品，主要作为铺设道路的材料使用。现代Oilbank生产和供应的沥青，不仅满足了用于铺设道路的沥青规格认证(KS M2201)，还是在韩国唯一获得日本沥青规格认证(JIS K2207)的优质产品。

基础油(Lube Base Oil)
基础油是以加氢裂化装置生产的蜡油为原料，通过催化装置生产的产品。作为占成品润滑油比重超过80%的基础原料，通过将各种添加剂添加到基础油，生产汽车、船舶、工业用成品润滑油。

润滑油(Lubricants)
现代Oilbank生产和供应润滑油(品牌“XTeer”)和燃料添加剂(品牌“XTeer α”)

碳黑(Carbon Black)
将碳化氢(油浆、煤焦油等)燃料通过不完全燃烧或热解装置来制成的微细碳粉，具有增强橡胶属性的性能，作为轮胎的主要配料使用。

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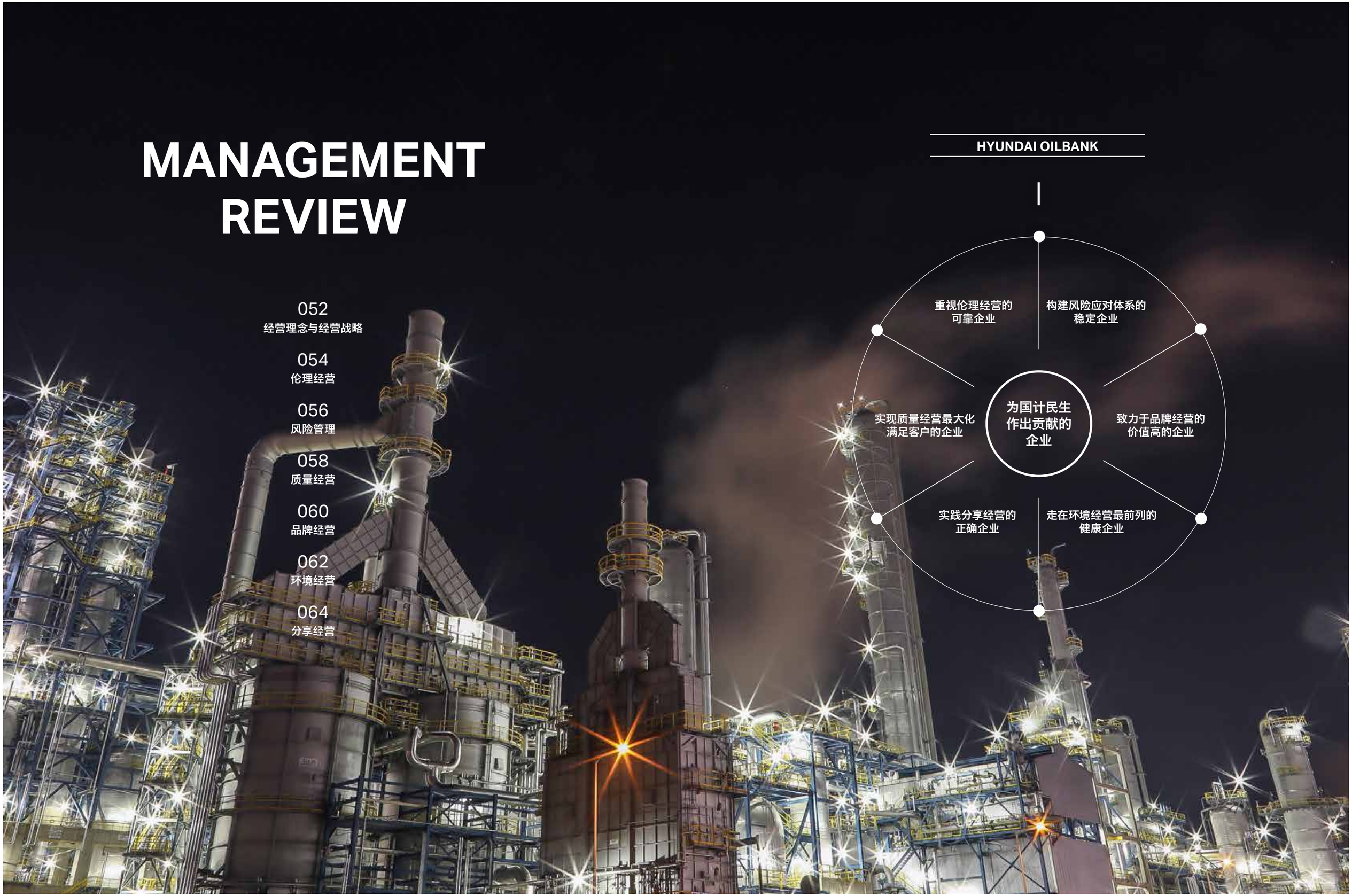


经营理念与经营战略

现代Oilbank决心诚实地履行企业的根本目的和社会赋予的责任，以贡献于国家经济和社会发展。为此，现代Oilbank确立了涵盖所有利益相关者的经营理念，实施以夯实公司中长期发展基础为目的的经营战略。

经营理念

现代Oilbank的经营理念由七个具体方针组成。

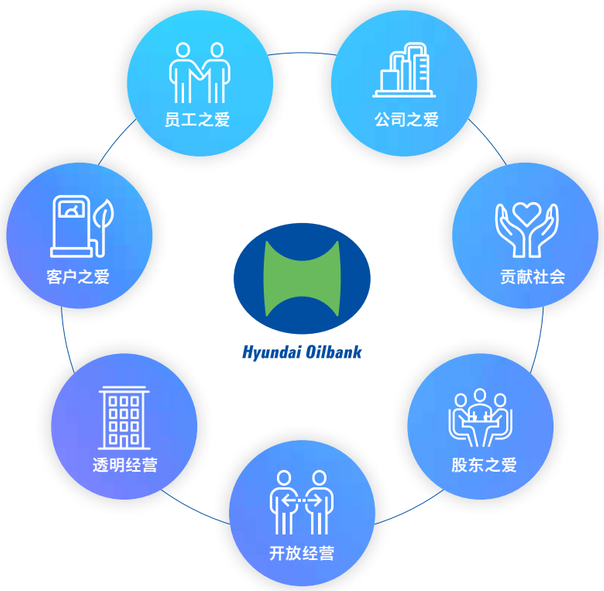
提高利益相关者的价值

现代Oilbank以尊重客户和股东、公司和员工及地区社会为信念，为提高各利益相关者的价值而不懈努力。一方面为了提高生活的立足之地——公司的名誉和价值而努力，同时员工们深知自己就是公司的主人，尊重彼此的人格，激发彼此的创意，不断提高企业实力。本公司认识到满足客户是所有业务之根本，以正直、诚实的姿态为客户创造价值，同时以效率化经营不断创造可持续价值，努力实现股东价值最大化。此外，本公司还认识到自己本身就是国家基础工业的中轴，为贡献于国家经济和社会发展而不懈努力，与地区社会共同体携手探索合作共赢发展之路。

为成为值得信赖的企业而开展经营活动

现代Oilbank通过开展透明经营和开放经营，力争成为赢得社会信赖和尊敬的企业。本公司正依托高水平伦理标准，遵守相关社会规范和秩序，走在公平和透明经营的前列，积极公开公司经营所需信息，开展员工自由参与的开放经营。通过这一努力，本公司将不断加强核心力量，提供最佳产品和服务，实践客户、员工、合作伙伴企业、股东及地区社会的利益，全面履行企业的根本目的和责任，发展成为值得信赖的企业。

经营理念



人才观

现代Oilbank追求的人才是“创造性实践人”。即，对于组织正在追求的价值，有能力创造这一价值的人，就是“创造性实践人”，本公司的人才观基于“现代精神”。现代精神源自已故郑周永名誉会长的创业精神，寓意着“就算是看起来不可能的事情，只要凭借不屈不挠的斗志和坚忍不拔的推进力进行挑战，就一定能够排除万难，取得胜利”。

现代Oilbank的人才观

挑战最高水平的激情四溢的人才

怀揣着对工作的热情和挑战最高水平的自信，引领自我和公司发展的人。凭借大胆的开拓者精神、满足客户的热情、彻底的职业意识和责任感、坚韧不拔的推进力，打造自我和公司价值。

+

改变世界的革新性人才

通过快乐的想像和创意性实践，实现积极的变化，创造更美好未来的人。凭借广范围的经验和学习、领先于他人的洞察力和开放性思维、激励同伴共同前进的勇气，引领革新，打造更美好的未来。

+

品行正直、值得信赖的人才

凭借尊重和爱护他人、开放性沟通、正直和诚实的行动，值得信赖的人。怀揣着没有偏见的信念，包容多样性，公平行动，基于正直性和清廉性，积累同事、邻里和社会给予的深厚信任。

经营战略

2018年，现代Oilbank创造了营业利润6610亿韩元。据分析，这是因为2018年年底每桶油价暴跌至49.5美元，汽油和石脑油的利润恶化到过去十年来的最低水平所致。进入2019年以来，虽然因欧佩克作出了追加减产决定，油价逐渐趋于稳定，但是，若美国贝岩油供应过剩及全球经济增长率放缓状况持续，则油价及产品利差的前景依然不容乐观。

尽管经营环境如此艰难，现代Oilbank将继续引进最优化工厂运转系统，改善工厂效率性，继续开展余热回收等节能方面的努力。另外，随着国际海事组织(IMO)的规制趋于更加严格，超重质油的价格会因此而下降，现代Oilbank将扩大超重质油的进口量，生产和销售符合IMO规格的船舶油等，不断强化成本竞争力及改善销售利差。同时，为进军石化领域这一新市场，本公司将全力以赴地推进HPC项目，同时所有工厂都以安全与环保为本开展运营，实现“零”紧急停产，不断打造安全、健康的工作岗位。

2019年经营目标

以安全与环保为本
把安全与环保
作为经营重点目标推进

收益最大化
通过强化成本竞争力和
开拓销售市场，
实现收益最大化

**集中全公司的力量
支持HPC项目**
为成功地完成大型
HPC项目，集中全公司的
力量提供支持

伦理经营

现代Oilbank重视伦理经营，实践透明经营，并致力于将伦理经营发展成为企业文化，成长为值得利益相关者信赖的企业。

伦理经营体系及活动项目

自2002年引进伦理经营后，现代Oilbank以客户和合作伙伴公司“乐于交易的公司”、股东“乐于投资的公司”、员工“乐于工作的公司”和“全面履行国家和社会赋予之责任的公司”为目标，积极实践伦理经营。尤其，自2010年成为现代重工业集团的一员后，通过建立集团层面的伦理经营体系，强化了经营的透明度和全体员工的伦理意识。

伦理经营推进体系

为了实现公平、透明的经营，现代Oilbank制定了伦理宪章、伦理规范、职务伦理实践指南等伦理标准，并以此为根据，通过教育、宣传及多种实践计划，实施系统的、有效的伦理经营体系。此外，针对需要采用更加严格的伦理意识标准的职务，如采购、人事、营业、财务、会计、设计、电算等六种职务，还另外适用了特定职务伦理规范。

伦理经营主要实践项目

伦理经营实践誓约	每年向全体员工及合作伙伴公司征收熟记伦理经营规定、遵守政策和制度的伦理经营实践誓约书。
利益关系申报制度	公司员工在履行职务过程中，若认为有可能发生利益关系时，须事先向公司申报，以此来确立透明的交易惯例。为此，每年以全体员工及合作伙伴公司为对象征收利益关系申报书。
伦理经营教育及宣传	通过伦理经营集中教育、定制型网上教育、收看视频等多种宣传活动，加深员工对规定的理解，提高他们遵守规定的意志和决心。
自我检查伦理经营遵守事项	每年将伦理经营相关规定遵守事项以问卷形式检查表发放给全体员工，由员工进行自我检查，以使员工加深对相关规定的理解，并找出需要改善之处。
现场聆听伦理经营	开展以员工和合作伙伴公司为对象，深入现场聆听员工的呼声，对现场员工伦理经营实践水平进行诊断，听取有关需要改善事项的意见，并对意见的执行与否进行检查，反映到业务中。
非伦理行为举报制度及保护举报人	为了预防与职务有关的非伦理行为的发生，建立伦理的企业文化，实施了举报和奖励制度。为防止举报人身份暴露，对举报人的身份严加保密，并保护举报人避免因举报而遭受负面影响。
礼物退还制度	若员工在不得已的情况下，收受了合作伙伴公司等利益相关者赠与的礼物时，通过简单的通报程序，委托指定的快递公司将礼物退还给当事人，或捐赠给社会福利团体的制度。

公平交易自觉遵守项目

现代Oilbank从2003年起引进了公平交易合规项目(CP, Compliance Program)，使之贯穿于经营活动的全部领域。通过实施CP明确了遵守公平交易法的行为标准，预防了经营活动中有可能违反法规的行为，从短期绩效看，可减少违法行为发生的法律费用；从长期绩效看，可为提高企业价值作出贡献。

CP主要实践项目

阐明CEO实施合规项目的意志	阐明了实施合规项目的意志及方针(电子文件、主页)
选任首席合规官(CCO)并进行管理	任命经营支援本部长(主管部门: 政策支援组)
编制和发放合规项目汇编	2003年12月
实施员工教育计划	内部教育: 法令的制定和修订教育，合规项目负责人教育，合规项目检查及教育，新员工、老员工、组长、加油站站长教育等 外部委托教育: 韩国公平竞争联合会、公平交易委员会等主管 网上研修院: 在线教育
建立内部监督体系	公平交易业务规定及全公司业务流程书 通过向合规项目负责人发送邮件，商谈合规项目，以及举报违反公平交易行为等，运作内部和外部举报系统 实施公平交易合规检查，实施业务事前研究系统
建立违法者处罚体系	根据人事规定(奖励、惩戒规定)进行制裁 由人事委员会审议和决定(最严制裁可给予“解雇”)
建立文件管理体系	与合规项目相关的线上及线下文件管理(管理部门: 政策支援组)

风险管理

现代Oilbank针对油价和汇率变动等多种危险因素并存的炼油市场的特点，完备了风险应对体系。同时，为迅速、正确地应对迅猛变化的市场状况，将损失降至最低，开展有体系的、高效的风险分析。

风险管理组织

现代Oilbank实施以CEO为委员长的风险管理委员会。委员会对外汇风险、油价风险和精炼利差等多种形态的风险进行整合管理。

油价变动风险管理

现代Oilbank主要从中东进口的原油大部分以装船月基准价格为准进行交易，因此在为期一个月的运输期间内可能因购买价和交割价价差变动带来风险。将受价差变动影响的货量定义为风险货量，首先对购买原油的现货价格的合约月份进行调整，然后再通过掉期交易对冲来调整，以此来管理暴露于风险的货量。为防止油价变动带来的损失，现代Oilbank对追加开工利差进行对冲，在固定价投标、储备油和设施租赁时，也必须实施对冲，这已成为制度化。

原油进口渠道多样化

现代Oilbank正积极拓宽原油进口渠道，以从根本上回避进口伊朗在内的中东产原油造成的地缘政治学风险。随着购买原油地区从中东扩大到南美、北海等地区，购买原油的价格标准也从迪拜原油价格，到西德克萨斯中间基原油(WTI)价格、布伦特原油价格等变得多样化，现代Oilbank正根据市场状况，致力于实现原油进口的经济性。今后，现代Oilbank计划与工厂联动，不断发掘原油进口新渠道，有效地隔离风险的同时，实现盈利最大化。

外汇风险管理

现代Oilbank从海外进口原料和出口产品时均以外汇为基础，由于这种行业特征，常常暴露在汇率变动导致的外汇风险中，现代Oilbank通过风险管理委员会制定应对汇率变动风险的最佳对冲战略。专门管理外汇风险的部门根据风险管理委员会作出的对冲战略决定，对暴露于外汇风险的部分实施积极的对冲，通过最大程度地降低外汇风险来管理外汇风险。

质量经营

现代Oilbank通过制定严格的各级质量检查和系统的质量投诉应对体系，不断提高售后服务水平。同时，现代Oilbank运营中央技术研究院，通过持续的研发活动，为最大程度地满足客户而努力。

质量管理

从产品的生产阶段到销售阶段，现代Oilbank根据法律规定，对整个流通过程实施全面的质量检查。尤其，为了对最终流通阶段实施高水平的管理，全年实施事前质量检查，对产品质量进行全面管理的同时，凭借应用移动实验室的质量管理服务及现场支援，不断提高最终客户的满意度。

质量经营认证

凭借这些努力，2015年，现代Oilbank在韩国产业通商资源部及环境部以加油站为对象定期实施的燃料质量检查中，获得了全部合格的优异成绩。此外，现代Oilbank还在由韩国石油管理院主管、包括四家炼油公司等在内的韩国大部分石油试验室共同参加的“燃料油、LPG、沥青精密度比较试验”中，从2014年起，每年全部油种、全部项目均通过了质量试验，客观可信度得到了广泛认可。2016年，现代Oilbank诚实地执行了ISO 9001质量管理体系，使质量管理能力达到了国际公认的水平。

质量投诉应对体系

现代Oilbank下设营业支援组，专门负责处理客户的质量投诉，一旦接到投诉，立即联合各有关部门共同处理客户投诉事项，并与客户共享处理结果。在处理客户投诉过程中，一旦出现延误，便立即寻找原因，及时予以排除，为迅速处理客户投诉作出了不懈努力。此外，还在板桥运营具备最尖端试验分析设备的“客户技术支援中心”及移动实验室，开展迅速满足客户需求的质量管理服务。即使在客户投诉原因不明确的情况下，仍然以72小时内访问客户，就投诉事项达成协议为原则，并迅速收集样品，将质量测试结果，迅速通报给有关部门和客户的同时，还可通过移动实验室对产品质量进行现场确认，并把结果通报给客户。

为了迅速正确地处理客户的质量投诉，现代Oilbank以全体营业员工和加油站管理人为对象，定期实施质量教育，每年通过发行《现代Oilbank质量手册》，使全体员工能够快速应对客户质量投诉。同时，为了保证客户的安全和健康，公开披露产品和服务中发生的有害物质信息，严格遵守与之相关的保健及安全规定。

质量投诉处理程序

研究开发

2011年11月，作为业务结构多元化，发掘新业务的排头兵，现代Oilbank在板桥科技谷成立了“中央技术研究院”。中央技术研究院致力于加强炼油和石化业务的技术竞争力，确保新的生产技术。另外，中央技术研究院于2017年11月迁至现代Electric龙仁研发中心，最大程度地扩大了集团成员公司间的协同效应。

中央技术研究院作用与活动

中央技术研究院整合了成立于1989年的现代Oilbank大山研究所及分布在首尔、釜山等全国各地工作场所的技术开发职能和研究人力，构筑了现代Oilbank的新一代研发中心基地。除了原油精炼新技术外，还致力于开发炼油催化剂、基础油、新一代燃料及石化产品等多种领域的技术，培养未来优秀技术人才。

中央技术研究院与韩国大学进行企校合作，与政府出资的研究所联合开展课题攻关，积极与海外企业联合在石油和石化领域开展技术合作。例如，与BTX合作伙伴日本科斯莫石油就在整个能源工业领域开展技术合作签订了谅解备忘录，开展技术人才交流。2016年9月，与(株)喜星触媒联合开展研发的催化剂成功地应用于第一柴油脱硫装置，实现了炼油脱硫催化剂原创技术的国产化，开创了韩国炼油行业的先河。目前，正致力于提高炼油脱硫催化剂的性能，开发加氢裂化催化剂，实现炼油装置最优化，开发石化新技术等。

中央技术研究院愿景及目标

中央技术研究院为全面履行优秀人才的摇篮和发掘新增长动力的先驱者这一历史重任，树立了以下愿景和目标并付诸实施。

第一，致力于加强技术竞争力，密切联系生产技术支援战略开展研发工作。应用试验工厂研究工艺参数影响力，加强装置催化剂最优化力量，研究催化剂制造技术和再生技术，不断加强技术竞争力。同时，将进一步加强企校研合作，为实现生产效率最大化而努力。

第二，为确保实现业务多元化和发掘新增长动力所必需的技术而开展研究。最大程度地集中中央技术研究院的力量，力争打入碳材料制造技术、石油系沥青高附加值技术、润滑油技术、高附加值溶剂开发、沥青改质、石化新业务等有发展潜力的领域。

第三，主导日益激烈的全球技术竞争，全力吸引和确保核心优秀人才，发掘和确保面向未来的新增长动力。为此，不断扩大面向国内外的技术合作范围，全力以赴地确保与公司地位相匹配，可为实现公司愿景起到带头人作用的优秀人才，为确保卓越的技术竞争力而努力。

品牌经营

现代Oilbank正以提高品牌价值、构建多种沟通渠道、提高服务水平、开展以客户为中心的差异化营销活动等为基础，提高客户满意度的同时，不断强化营业竞争力。

品牌活动

现代Oilbank正从多方面着手，致力于树立亲切的企业形象，提高公司和产品的品牌价值。

提高品牌价值

现代Oilbank在韩国首次建立了可以给电动汽车和氢燃料电池汽车充电的综合能源加注站，以实现燃料加注多样化的同时，扩大加油站综合开发，提供女性放心快递服务等，不断扩大应用加油站空间的方便客户的服务，以及为全面履行企业的社会责任而努力。

现代Oilbank还致力于提高产品的品牌价值。为提高润滑油品牌“XTeer”和燃料添加剂品牌“XTeer α”的知名度及搞活销路，成长为全球品牌，除现代汽车、保时捷、沃尔沃、MAN、雷诺外，又获得了宝马和奔驰颁发的发动机油认证，在韩国最早推出了满足美国石油协会标准最高规格的润滑油。同时，为提高生产效率，在大山工厂内新建了润滑油工厂。润滑油研究所正与现代重工业、现代汽车携手共同在造船、发动机、建设机械、电子、机器人、汽车领域开展研究，致力于开发最高质量的润滑油。

此外，现代Oilbank对加油站外观、工作服、广告制品、办公室等所有空间进行了统一的标准化设计等，对品牌进行统一管理的同时，对加油站宣传品的设计进行改进和持续进行管理等，使得品牌知名度和客户忠诚度不断攀升。

建立多种沟通渠道

现代Oilbank正通过体育赞助拉近与消费者的距离。现代Oilbank通过赞助韩国职业足球联赛、赞助蔚山现代足球队等开展体育营销活动，尤其，今年已迎来第十二个年头的对蔚山现代足球队的赞助，获得了非常高的宣传效果。另外，为了搞活“现代XTeer”的销路，本公司在韩国K1联赛的所有比赛场地播放90度广告，还在蔚山文殊体育场进行A板、LED板、电光板等广告。继2017年后，又于2019年在越南河内举办了蔚山现代足球队与越南国家队的友谊赛，为在越南当地广泛宣传“现代XTeer”和现代Oilbank发挥了积极作用。

同时，通过与二三十岁年轻一代进行畅通无阻的沟通，不断提高企业形象。去年5月，以品牌口号“Oh ~ Bang!”为主题，制作了六部广告视频，上载到SPOTV/YouTube等新媒体上。为了积极与年轻一代进行沟通，翻新了官方脸书和照片墙，作为梦想音乐会的主要赞助商进行赞助，为青少年实现梦想和希望加油助威。今后，现代Oilbank将继续致力于树立亲切的企业形象，不断拉近与消费者的距离。

提高亲切与清洁服务质量

现代Oilbank打出了“Good Service Bank!”的口号，并以此为中心，积极开展提高服务质量的活动，为树立亲切与清洁服务的加油站形象作出了不懈努力。现代Oilbank率先在韩国同行业运营客服专业组织，将客服领域专家(MD, Market Designer)派往各地，帮助加油站系统地改善亲切与清洁服务体系的同时，通过参与地区文化演出和庆典活动，与折扣店合作等，开展针对各地区特点的促销活动。现代Oilbank还通过对加油站管理人和加油员的客服提供支持的“服务活动”，站在客户的立场上评估营销活动和服务水平、建议改善方向的“服务监督”等多种活动，倾听来自客户和现场的呼声。与此同时，现代Oilbank还发行《加油客户服务指南》，不断扩大标准化服务范围。

2018年，凭借这些努力，现代Oilbank连续四年位居由韩国标准协会主管的韩国服务质量指数(KS-SQI)评比加油站部门的单独第一；连续十年位居韩国能率协会咨询主管的“韩国产业服务质量指数(KSQI)”客服中心部门第一；连续七年位居韩国标准协会主管的“客服中心质量指数(KS-CQI)”行业第一等，取得了优异成绩。

营销活动

现代Oilbank正确把握日益多样化的消费者的需求，并将这些需求反映于各种营销活动，积极应对不断变化的营销环境。

差异化客户管理

现代Oilbank通过对赠品卡客户的需求进行分析，为客户提供差异化服务。现代Oilbank开展可向赠品卡客户提供实质性优惠的多种客户关系管理(CRM)活动。最典型的CRM活动有，为不同类型客户量身打造的“客户专业化CRM”、与合作伙伴企业联合开展的“合作型CRM”等活动。此外，现代Oilbank还以赠品卡客户为对象，开展针对季节特点提供实质性优惠的“四季快乐促销”、以加油客户为对象提供抽奖券的“线上抽奖活动”等差异化服务活动，致力于提高客户的忠诚度。

扩大联合营销

现代Oilbank与百货店、在线购物、汽车、食品饮料、餐饮等韩国各行业顶级企业合作，不断扩大赠品卡积分累积和使用范围。除了加油外，现代Oilbank还与现代汽车的蓝色积分和起亚汽车的红色积分等合作，对客户使用积分购买和修理汽车、购买现代摩比斯配件等提供支援，通过让消费者能够切身感受到的实质性优惠营销活动，给予客户更全面的关怀，同时，现代Oilbank还通过加油站综合开发等，为扩大油外业务而加强合作。

与从属加油站建立强有力的合作伙伴关系

现代Oilbank通过优待从属加油站、加气站业主的伙伴关系管理项目(PRM, Partner Relationship Management)，加强与从属加油站的伙伴关系。本公司每年都邀请加油站业主及其家属，举办提供特别体验的文化活动。此外，还提供综合医院体检、支援红白喜事用品等，开展与实际生活密切相关的支援活动。同时，为搞活加油站促销活动，还开展面向加油客户免费提供咖啡的“咖啡师上门服务”活动，还对以全国最低价购买优质产品的团购活动提供支持。2018年，新引进并实施了集中力量支持新加油站的“蜜月计划”，发行加油站管理人快速手册(安全管理、营销秘诀、经营管理等)，对工作场所的经营提供帮助。

环境经营

现代Oilbank加强环境经营活动，将生产活动造成的环境污染降至最低，通过持续开展安全检查，实施事故预防计划，营造安全的作业环境。

整合环境管理体系

为将生产活动造成的环境污染降至最低，现代Oilbank正在构建整合环境管理体系，持续投资于环境保护设施。同时，现代Oilbank制定环境方针，为开展环境经营活动确立了基本方向，并获得了国际标准化组织ISO认证机构颁发的ISO 14001环境管理体系认证，根据国际标准运营环境管理体系。此外，还建立了环境整合信息系统，对大气、水质、废弃物、化学物质、教育等相关资料，进行有效、系统的管理。

综合环境管理体系的主要领域

事前环境评价	现代Oilbank的所有经营活动，都要事前进行环境影响评价，并根据评价结果采取适当措施。
环境目标管理与公布	现代Oilbank定期对环境目标的成果进行调查、研究和审计，公布所设定的目标。
遵守环境管理规定	现代Oilbank严格遵守国际环境公约、韩国环境法规及现代Oilbank自主制定的环境管理规定。
防止环境污染	现代Oilbank自主制定环境目标及改善计划，通过持续改善工艺及加强污染防治能力，致力于防止环境污染。
持续开展教育	现代Oilbank持续开展教育并积极鼓励，使全体员工能够在业务过程中彻底地履行应尽的环保责任。

主要环境经营活动

环境投资

为了减少雾霾，现代Oilbank设置和运营最佳防污设施，周期性地运行路面清扫车辆。2017年和2019年分别与韩国忠南道厅和韩国环境部签署了减少雾霾自愿协议等，计划持续扩大旨在减少雾霾的投资。

应对气候变化

现代Oilbank通过管理能源基本单位、改善工艺、回收余热及改善运转方法等，致力于减排温室气体。现代Oilbank还积极参与韩国政府正在促进的绿色发展政策“排放权交易制”，为建设低碳社会发挥着领头羊作用。

安全环境协议会及安全环境检查

现代Oilbank通过定期实施安全环境检查，运作安全环境协议会，以事前预防及排除公司环境风险隐患，做到防患未然的同时，将事故造成的损害降至最低。

安全环境检查

- 通过事前检查，排除环境危险隐患
- 对基于环境检查结果制定的改善措施的实施绩效进行管理
- 核实环境法规、规定及方针遵守与否
- 到现场确认设施管理状况
- 每半年实施一次：直营加油站、物流中心、生产本部

安全环境协议会

- 制定安全环境投资计划，了解计划实施绩效
- 针对主要悬案问题制定相应的解决方案
- 监测各排放源的污染物排放浓度
- 共享主要法规修订事项
- 每季度实施一次：营业本部、生产本部、子公司

化学事故应急程序

为在发生化学事故后迅速采取有效措施，将化学事故造成的损害降至最低，现代Oilbank与韩国环境部(锦江流域环境厅)及大山产业园区附近公司联合成立和运作化学事故安全支援团。此外，为提高自主防治能力，重新完善了事故应对手册，根据年度计划针对各种典型事故案例，实施防范训练。

支援团

韩国环境部(锦江流域环境厅)、现代Oilbank、LG化学、韩华道达尔、LOTTE CHEMICAL及KCC

主要作用

- 发生化工事故时，提供化工事故发生地点及化学物质等信息。
- 发生事故后，提供各自储备的防范设备，对发生事故的工作场所周围地区的防范提供支援。
- 共享地区工业园区内信息，建立紧急联络网系统。

分享经营

现代Oilbank与分享1%基金携手积极开展分享活动，通过员工、家属及加油站共同参与的多种多样的社会奉献活动，实践企业的社会责任，营造阳光、健康的社会。

现代Oilbank分享1%基金

从2011年9月起，现代Oilbank员工每月捐赠工资的1%，用于关爱社会弱势群体，基于全体员工的这一理念，成立了现代Oilbank分享1%基金。现代Oilbank最先倡导了全体员工每月捐赠1%工资的活动，目前，韩国的其他企业和加油站的员工及家属也纷纷参与这一捐赠活动。所有员工的名片上都能看到“分享1%工资的企业”的句子，现已成为员工的幸福与自豪的象征。分享1%基金怀揣着这一崇高愿望，开展向弱势群体支援取暖用燃料油、修理和改造取暖设施的“爱心取暖油”，每天向家境贫困的老人提供午餐的“分享1%用膳房”，以最不发达国家儿童为对象提供援助的“希望地球村”等活动，到需要帮助的地方积极开展分享活动。

现代Oilbank分享1%基金愿景

凭借全体员工捐赠工资的1%的分享价值，再加上99%的希望能源，关爱社会的弱势群体，共建温暖、健康的社会。

主要社会奉献活动

购买瑞山地区产大米事业

放生石斑鱼

分享1%用膳房

与残疾人洗车员家属一起郊游

地区社会奉献活动

为与总公司所在地忠清南道瑞山地区居民实现合作共赢发展，现代Oilbank正在开展多种多样的合作事业。从2003年起，现代Oilbank通过购买瑞山地区产大米的“购买地区大米事业”，每年购买相当于10亿韩元的大米，从2002年起通过“放生石斑鱼事业”，每年在附近海域放生15万尾中等大小未成年石斑鱼，为增加农渔民的收入，振兴地区经济，作出了积极贡献。尤其，放生石斑鱼事业催生了代表地区的庆典活动——“三吉浦石斑鱼庆典”，为吸引游客作出了贡献，此外，持续开展三吉浦海滨清扫活动，为保护海洋环境作出了贡献。

自2003年成立以来，现代Oilbank奖学财团以公司附近地区家境贫困的初中生、高中生及大学生为对象，每年发放5000万韩元奖学金。
2011年9月完工的现代大竹公园免费向瑞山市民及地区居民开放。此公园占地1.74万平米，由天然草皮足球场、篮球场、排球场、生活设施等组成。2014年6月，现代Oilbank通过“瑞山花谷水库公园化事业”，营造了环保型绿色生态公园和环公园散步路，为地区居民提供了休息场所，同时，每年筹集5000万韩元资金，用于种植花草树木及治理海岸等，通过持续管理为促进地区经济发展作出了贡献。

员工志愿活动

从2005年起，现代Oilbank全体员工通过“幸福分享志愿活动”，以部门和社团为单位，到需要帮助的地方，每年开展5000小时以上的志愿活动。同时，现代Oilbank根据员工投入志愿活动的时间每满一小时就捐赠一万韩元，如此积攒的善款全部捐赠给志愿服务对象机构，提供的物品价格达到200万韩元，为营造与弱势群体共享温暖的世界增添了一份力量。不仅如此，签约参加分享1%工资活动的新员工还将自己组装的太阳能灯笼作为礼物捐赠给最不发达国家，到了年底员工们还为孩子们做一天圣诞老人等，正在开展各种主题的志愿活动。

社会奉献/赞助活动

现代Oilbank作为“一公司一兵营”活动的先进企业，与海军陆战队“延平部队”缔结兄弟关系，每年开展邀请官兵活动和慰问活动。每到弱势群体需要温暖呵护的冬季，现代Oilbank向小型社会福利设施和低收入家庭支援取暖用燃料油，帮助他们越过一个温暖的冬季。现代Oilbank通过奖学金事业向小本经营的货车司机和海洋警察子女提供奖学金，帮助他们的子女实现梦寐以求的梦想。此外，现代Oilbank还与参加捐款活动的员工共同开展和谐发展及志愿活动，营造共享具有“分享意义”的各种活动。

支援残疾人就业

从2003年起，现代Oilbank与韩国残疾人雇佣公团合作，参与为残疾人创造就业岗位的活动，雇佣包括重度残疾人在内的残疾人为直营加油站的洗车员。目前，共有19名残疾人在韩国的11个直营加油站作为洗车员参加工作，工作年头都超过了十年以上，他们作为社会的一员发挥着应有作用。从2012年起，每年邀请残疾人工友及其家属参加游乐园和植物园郊游、体验虚拟现实(VR)等活动，为举办与家属共同参与的活动提供支持，帮助他们编织人生宝贵的追忆。

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经营成果分析意见和展望

关于预测信息的注意事项

本公司在本报告中预测的未来可能发生的活动、事件或现象，反映了本公司对编制本报告当时发生的事件及财务成果的见解。本预测信息基于与未来业务环境相关的多种假设，而这些假设最终有可能不成立。此外，在这些假设中，还包含了预测信息中记载的预期值和与实际结果间存在重大差异的危险、不确定性及其他因素。这些因素可能包括与公司内部经营相关的因素和外部环境导致的因素，且不局限于此。

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I. 经济与市场状况

1. 2018年经济状况

2018年，世界经济因全球贸易争端、美联储上调利率、英国脱欧等不确定性因素不断扩大，增长势头比上年有所减弱。韩国经济因全球贸易争端、以发达国家为中心的货币紧缩政策带来的负面影响等国际因素，以及韩国就业率下降导致家庭消费能力下降，建设、设备投资持续低迷等国内因素，致使增长势头比上年有所减弱。

2. 市场状况

1) 国际原油市场及汇率

国际原油市场呈现出石油资源的有限性、地区偏重性、供求不确定性、石油价格的不稳定性等特性。对供求基本结构而言，国际原油市场仍然是以卖方为主调控市场的卖方市场。主要产油国集中在中东，中东产油国拥有全世界已确认埋藏量的75%，占世界年产量的40%。大部分中东产油国是欧佩克成员国，因此欧佩克对国际原油市场的影响力非常大。但是，非欧佩克成员国的国际原油市场份额较过去急剧增加，尤其，随着北美页岩油产量增加，国际原油市场价格的形成已非由欧佩克“一锤定音”，非欧佩克国家的影响力正日益增加。

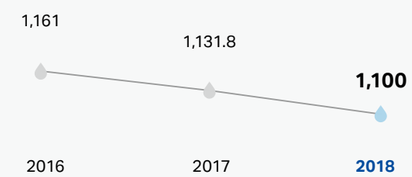
2018年，国际油价受委内瑞拉生产差池和美国制裁伊朗等影响，比2017年有所上升。但是，第四季度因全球经济增长放缓、沙特和俄罗斯增产原油、美国原油库存增加等，将导致市场供过于求的预期，致使迪拜油价以年底为准跌至53美元。

2019年，国际油价将受对原油需求放缓的担忧和产油国是否履行减产协议等因素的综合影响，预计变动性将会扩大。然而，考虑到在上半年，沙特主导的欧佩克减产意志坚定，而在下半年，美国原油增产将加速，预计国际油价将会呈现“上半年高下半年低”的趋势。

2018年，美元兑韩元汇率受美国加息和中美贸易争端的影响，出现了“上半年跌下半年涨”的趋势。上半年，受全球经济乐观论和南北首脑会谈等影响，韩元走强，汇率稳定在1050~1100韩元范围，但是六月以后，受美国债券利率上升影响，美元转为强势，受中美加征关税影响，美元兑韩元汇率暴涨。进入年底以后，随着全球经济增长放缓，美联储暗示上调基准利率的速度可能会缓和，此后导致美元疲软，美元兑韩元的交易基准汇率最终以1118.1韩元收盘。

2019年，美元兑韩元汇率预计受全球经济增长放缓和中美贸易争端长期化的影响将小幅上升。但是，韩国的经济基本面仍保持良好水平，预计全年美元兑韩元汇率将在1050~1150韩元的有限范围内变动。

平均外汇汇率 (单位：韩元/美元)



精炼能力 (单位：千桶/日)

现代Oilbank	**650**
SK energy	840
GS Caltex	775
S-OIL	669

* 含现代化学凝析油分馏产品13万桶

2) 韩国炼油工业概要

上世纪九十年代初，韩国炼油公司纷纷进行大规模扩建，使韩国炼油工业原油精炼设施规模居世界第六位。韩国炼油工业依靠庞大的炼油设施，实现了规模经济，并在国际出口竞争上确保了优势地位。以此为基础，韩国炼油工业跳脱了内需工业烙印，不断扩大石油产品出口，目前总产量的50%以上用于出口。

2018年，随着国际油价持续上涨，韩国国内炼油企业的精炼利差比上年有所改善，并享有了良好的市场环境。但是，随着第四季度油价暴跌，汽油、石脑油裂化产品价格下降，导致经营业绩恶化，2018年营业利润比上年下降。

2019年，虽然全世界范围内大型精炼设施扩建计划已板上钉钉，但是，随着国际海事组织(IMO)的规制从2020年起实施，预计其效果将从2019年下半年开始显现，因此综合精炼利差将保持坚挺势头。但是，美国扩大页岩油产量及欧佩克不履行减产承诺等因素，将导致国际油价下滑，同时，地政学风险等不确定性因素也依然存在。鉴于石油产品市场的不确定性在扩大，本公司将通过实施出口渠道多样化、产品质量高级化等多种销售战略，以及通过持续提高尖端化率、扩大产能等投资来提高竞争力。

尖端化率 (单位：%)

现代Oilbank	**40.6**
SK energy	23.2
GS Caltex	35.4
S-OIL	38.9

经营成果分析意见和展望

II. 主要财务成果

1. 主要经营成果

(单位: 亿韩元)

科目	2018	2017	变动	
1. 销售收入	**215,036**	163,873	51,163	31.2%
2. 销售成本	**204,315**	148,307	56,008	37.8%
3. 销售毛利润	**10,721**	15,566	-4,845	-31.1%
4. 销售与管理支出	**4,111**	4,188	-77	-1.8%
5. 营业利润	**6,610**	11,378	-4,768	-41.9%
6. 营业外损益	**-1,235**	952	-2,187	-229.7%
7. 利润总额	**5,375**	12,330	-6,955	-56.4%
8. 所得税费用	**-1,337**	-2,951	1,614	-54.7%
9. 本期净利润	**4,038**	9,379	-5,341	-56.9%
营业利润率	**3.1%**	6.9%	-3.8%p	-55.1%
本期净利润率	**1.9%**	5.7%	-3.8%p	-66.7%

※ 以合并财务报表为准

为应对国际油价变动、国内外经济不确定性等艰难的经营环境，本公司以实现最高水平的效率为目标，从原油进口到生产、销售，不断提高收益率，使新业务早日实现软着陆等，致力于业务多元化。对现场经营而言，通过灵活地调整开工率，对精炼利差进行跟踪和管理；通过调整产品库存量等，对库存损益进行实时管理等，本公司一直秉持着这些经营管理理念。同时，通过内销和出口渠道的经济性分析，最大程度地扩大了营销渠道的销售利差优势提高销售收益。本公司将通过高收益率的尖端化设施稳定的运转，持续降低成本等措施，为改善收益率作出努力。

凭借为改善经营作出的不懈努力，本公司确保了以下竞争力。

第一，提高生产率。新建流化床锅炉、回收余热与通过能源咨询节省能源、扩大尖端化装置效率及通过装置自动化，改善装置运转水平。

第二，确保原油进口成本竞争力。扩大了北海产福蒂斯(Forties)、俄罗斯产索科尔(Sokol)、墨西哥产玛雅(Maya)和伊斯莫斯(Isthmus)等非中东原油的进口量，还发掘出C5C6及溶剂二甲苯等新的进口基础材料，进一步扩大了辅助材料的进口。

第三，通过持续投资，确保了韩国领先的尖端化设备，并实现了安全运转和1300万工时零事故。今后，将以之前积累的专业知识和经验为基础，稳定地运转最高水平的工厂及确保能够最大程度地实现收益能力。

2. 销售收入分析

1) 销售收入

最近受页岩带(Shale Band)理论等影响，低油价市场环境继续延续，石油产品需求增长率也趋于缓和。本公司为应对这种外部经营环境的变化，以灵活地应对这一市场状况为基本，致力于内销和出口的均衡管理。为此，本公司正致力于通过加强销售渠道多样化和开发新渠道，提高销售能力，通过构筑具有竞争力的销售网络，提高收益能力，通过确保新业务推进能力，创造新的收益模式。

2) 各渠道销售战略

本公司正通过抢先应对市场环境变化，灵活地调整各渠道的销量。同时，本公司制定和实施了针对各渠道的销售战略，不断实现收益最大化。

零售

作为向加油站、代理店、农协、一般销售点、LPG加气站等销售产品的渠道，主要供应轻质油产品。零售渠道是内销的根本渠道，本公司正通过扩大开发新的战略地区，强化广告和大众传媒的促销等，扩大零售渠道的销量，不断提高市场掌控能力。此外，本公司正通过使加油站亲切与清洁服务走上正轨，提高品牌价值，开发综合加油站等，致力于扩大营业利润和提高资产价值。

直销

作为针对一般企业、军队或政府、投标等的法人营销渠道，不同于主要供应轻质油的零售渠道，主要供应海上油、航空煤油、沥青、石脑油等多种产品。同时，针对直销渠道，本公司正通过开发专用油种，发掘新客户，致力于创造新的收益来源。

出口

本公司完成尖端化设施扩建后，随着开工率增加及出口产品实现多样化，出口比重呈现稳定的增长势头。鉴于最近内销市场和海外市场的联动效果日益增加，本公司将业务重点放在了通过内销与出口业务组合最优化来实现收益最大化方面，作为该重点的一环，正致力于向销售利润较高的越南地区出口汽油和进军新加坡海上加油业务领域等，为确保新的发展引擎而努力。

3) 各产品销量

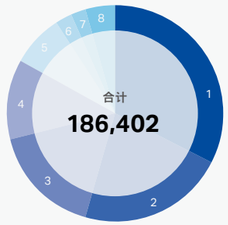
随着尖端化设施投产后，尖端化率占精炼能力的比例从2014年的36.7%增至2016年的40.6%，尖端化率维持在韩国最高水平上，包括汽油、航空煤油、煤油、柴油等在内的轻质油在销售收入中占比也保持着稳定状态。从各产品销量占比看，最大的是柴油，占35.6%；其他依次为石脑油、汽油和燃料油。随着尖端化设施投产，带动高附加值产品生产比例增加，使整体业务竞争力及收益基础得到强化。

各产品销量占比 (单位: 千桶)

2018

1. 柴油	65,023	35.6%
2. 石脑油	48,888	21.1%
3. 汽油	33,986	17.3%
4. 燃料油	20,636	9.3%
5. 航空煤油	16,009	8.4%
6. 煤油	4,703	2.6%
7. LPG	4,053	1.4%
8. 其他	9,016	4.3%

2017



1. 柴油	60,673	32.5%
2. 石脑油	41,000	22.0%
3. 汽油	31,140	16.7%
4. 燃料油	22,323	12.0%
5. 航空煤油	14,244	7.6%
6. 煤油	4,982	2.7%
7. LPG	3,748	2.0%
8. 其他	8,292	4.4%

2016

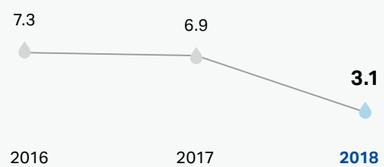
1. 柴油	59,417	32.7%
2. 石脑油	36,714	20.2%
3. 汽油	32,014	17.6%
4. 燃料油	22,346	12.3%
5. 航空煤油	15,226	8.4%
6. 煤油	5,152	2.8%
7. LPG	3,214	1.8%
8. 其他	7,667	4.2%

经营成果分析意见和展望

3. 收益率分析

本公司通过韩国同行业领先的尖端化率、相对精炼年产能占比较高的内销市场份额及内涵式管理，不断创造较高的营业利润率。继在2014年克服极其不利的外部经营环境，实现了良好的营业利润之后，又创造了连续25个季度实现盈余的优异成绩等，实现了稳定的营业利润。2018年第四季度，因油价暴跌导致大规模库存评估损失，致使经营业绩出现亏损，但仍然保持着韩国同行业炼油部门最高水平的营业利润率。

营业利润率 (单位：%)



※ 以合并财务报表为准

2019年上半年，享有WTI弱势带来的低价原材料效果的美国炼油企业将提高开工率，这将导致汽油裂化产品弱势持续下去等，与上年同期相比，预计综合精炼利差将呈现弱势。但是，到2019年上半年，预计原油供过于求现象将解除，导致油价上涨，到2019年下半年，受国际海事组织(IMO)规制影响，将导致轻质油裂化产品价格全面上升，预计公司经营业绩将逐渐得到改善。

面对这一市场环境的中长期展望，本公司将通过发掘新业务致力于实现利润极大化，开展提高生产率、节能、开发利差比较大的海外市场及积极改善各本部收益等活动。2019年，本公司将继续致力于提高原油进口、生产、销售等各个阶段的效率，继续保持优异的收益率。

4. 未来投资分析

为通过持续的技术革新和研发，加强炼油及石化业务的实力；通过发掘新业务，创造未来价值，本公司于2011年11月成立了中央技术研究院。

中央技术研究院由研发一组、研发二组和工厂支援研究组组成，主要开展以加强现有业务竞争力为目的的装置催化剂研发、对大山工厂提供技术支援、脱硫石膏应用研究、以创造新增长动力为目的的合成基础油开发和功能性专用产品开发。

此外，还担负着应用重质油制造碳材料的原料制造技术、油浆加氢裂化装置及催化剂国家课题等研发项目的同时，通过企校研共同研究，与海外研究所开展技术交流等，努力加强现有业务竞争力和确保新增长动力。

5. 财务现状

1) 简要财务状态

截至2018年年底，本公司的资产总计达到11.7448万亿韩元，同比增长了7.3%。虽然，年底油价下跌导致销售债券同比减少，但是，开工率增加导致库存资产等增加，使得全部流动资产同比增长了6.2%，增至4.3583万亿韩元。另外，设施投资带动了有型资产的增加，非流动资产增长了8.0%，增至7.3865万亿韩元。短期负债增加等，导致流动负债同比增长了20.5%，增至4.5780万亿韩元；非流动负债下降了1.9%，降至2.0427万亿韩元；负债总计同比增长了12.6%，增至6.6207万亿韩元。所有者权益同比增长了1.2%，增至5.1241万亿韩元，产权比率同比增长了13.1%p，增至129.2%。

关键财务指标

(单位：亿韩元)

	2018	2017	变动	
流动资产	**43,583**	41,036	2,547	6.2%
非流动资产	**73,865**	68,377	5,488	8.0%
资产总计	**117,448**	109,413	8,035	7.3%
流动负债	**45,780**	37,977	7,803	20.5%
非流动负债	**20,427**	20,817	-390	-1.9%
负债总计	**66,207**	58,794	7,413	12.6%
资本金	**12,254**	12,254	0	0.0%
混合资本证券	**2,243**	2,243	0	0.0%
资本公积	**17**	17	0	0.0%
累计其他综合收益	**2,286**	2,148	138	6.4%
未分配利润	**31,099**	30,642	457	1.5%
非控制性权益	**3,342**	3,315	27	0.8%
所有者权益合计	**51,241**	50,619	622	1.2%
产权比率	**129.2%**	116.1%	13.1%p	11.3%

※ 以合并财务报表为准

2) 资本支出

本公司正持续进行投资，以通过加强炼油和石化业务力量、发掘新业务来创造未来价值。同时，通过扩大尖端化设施容量来扩大现有业务价值的同时，致力于提高现有投资的效率、安全地运转工厂、对营销网络进行补充投资。本公司正通过这些投资活动来确保中长期增长动力，以及奠定可持续创造收益的基础，不断加强全球竞争力。

(单位：亿韩元)

	2018	2017	变动	
新投资	**4,607**	3,714	893	24.0%
补充投资	**2,472**	1,750	722	41.3%
合计	**7,079**	5,464	1,615	29.6%

※ 以现代Oilbank为准

6. 流动性及融资

1) 流动性现状

截至2018年年底，本公司由现金、现金资产和短期金融资产组成的流动性为1689亿韩元。本公司对流动性进行实时监控，将流动性规模控制在适当水平，以满足运营资金等资金需求。

2) 融资

本公司着眼于长远观点，应用发行公司债券和混合资本证券等结构更加稳定的融资手段。截至2018年年底，净负债约为3.2608万亿韩元，同比增加了约5438亿韩元。主要是炼油业务尖端化设施扩建投资、为扩大日产能而进行的扩建投资及实施第一工厂定期维修所致。

截至2018年年底，本公司负债总计为6.6207万亿韩元，同比增长了12.6%，产权比率同比增长了13.1%p，增至129.2%。

Independent Auditors' Report

(Based on a report originally issued in Korean)

To the Board of Directors and Shareholders of
Hyundai Oilbank Co., Ltd.

Opinion

We have audited the consolidated financial statements of Hyundai Oilbank Co., Ltd. and its subsidiaries ("the Group"), which comprise the consolidated statements of financial position as of December 31, 2018, the consolidated statements of income and other comprehensive income, changes in equity and cash flows for the year then ended, and notes, comprising significant accounting policies.

In our opinion, the accompanying consolidated financial statements present fairly, in all material respects, the consolidated financial position of the Group as of December 31, 2018, and its consolidated financial performance and its consolidated cash flows for the year then ended in accordance with Korean International Financial Reporting Standards ("K-IFRS").

Basis for Opinion

We conducted our audits in accordance with Korean Standards on Auditing ("KSAs"). Our responsibilities under those standards are further described in the Auditors' Responsibilities for the Audit of the Consolidated Financial Statements section of our report. We are independent of the Group in accordance with the ethical requirements that are relevant to our audit of the consolidated financial statements in Republic of Korea, and we have fulfilled our other ethical responsibilities in accordance with these requirements. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Other Matter

The consolidated financial statements of the Group as of December 31, 2017 and for the year then ended, including the retrospective adjustments described in Note 34 to the consolidated financial statements, which together form the basis for the comparative information, were audited by other auditors who expressed an unmodified opinion on those statements on March 9, 2018, except as to the retrospective adjustments described in Note 34 to the consolidated financial statements, which is as of July 6, 2018.

The procedures and practices utilized in the Republic of Korea to audit such consolidated financial statements may differ from those generally accepted and applied in other countries.

Responsibilities of Management and Those Charged with Governance for the Separate Financial Statements

Management is responsible for the preparation and fair presentation of the consolidated financial statements in accordance with K-IFRS, and for such internal control as management determines is necessary to enable the preparation of consolidated financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the consolidated financial statements, management is responsible for assessing the Group's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless management either intends to liquidate the Group or to cease operations, or has no realistic alternative but to do so.

Those charged with governance are responsible for overseeing the Group's financial reporting process.

Auditors' Responsibilities for the Audit of the Separate Financial Statements

Our objectives are to obtain reasonable assurance about whether the consolidated financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditors' report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with KSAs will always detect a

material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these consolidated financial statements.

As part of an audit in accordance with KSAs, we exercise professional judgment and maintain professional skepticism throughout the audit. We also:

- Identify and assess the risks of material misstatement of the consolidated financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.

- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Group's internal control.

- Evaluate the appropriateness of accounting policies used in the preparation of the consolidated financial statements and the reasonableness of accounting estimates and related disclosures made by management.

- Conclude on the appropriateness of management's use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Group's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditors' report to the related disclosures in the consolidated financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditors' report. However, future events or conditions may cause the Group to cease to continue as a going concern.

- Evaluate the overall presentation, structure and content of the consolidated financial statements, including the disclosures, and whether the consolidated financial statements represent the underlying transactions and events in a manner that achieves fair presentation.

- Obtain sufficient appropriate audit evidence regarding the financial information of the entities or business activities within the Group to express an opinion on the consolidated financial statements. We are responsible for the direction, supervision and performance of the group audit. We remain solely responsible for our audit opinion.

We communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

Seoul, Korea
March 19, 2019

This report is effective as of March 19, 2019, the audit report date. Certain subsequent events or circumstances, which may occur between the audit report date and the time of reading this report, could have a material impact on the accompanying consolidated financial statements and notes thereto. Accordingly, the readers of the audit report should understand that the above audit report has not been updated to reflect the impact of such subsequent events or circumstances, if any.

Hyundai Oilbank Co., Ltd. and Subsidiaries
Consolidated Statements of Financial Position
December 31, 2018 and 2017

(In thousands of Korean won)

	Notes	December 31, 2018	December 31, 2017
Assets			
Current assets			
Cash and cash equivalents		**162,638,021**	148,231,468
Short-term financial assets	8	**6,300,000**	10,183,166
Financial assets at fair value through profit or loss	20	**210,024**	-
Derivative financial assets	20	**13,082,543**	43,847,366
Trade and other receivables	10,32	**1,348,515,254**	1,694,497,926
Inventories	11	**2,740,226,114**	2,118,970,938
Other current assets		**87,287,201**	87,850,579
		4,358,259,157	4,103,581,443
Non-current assets			
Investments in associates	12	**457,079,019**	382,028,112
Long-term financial assets	8	**1,023,000**	2,024,500
Available-for-sale financial assets	9	**-**	3,000,000
Trade and other receivables	10	**129,322,184**	114,143,596
Investment properties	13	**10,634,973**	10,634,973
Property, plant and equipment	14	**6,677,979,279**	6,199,156,466
Intangible assets	15	**95,689,938**	96,379,356
Deferred tax assets	29	**3,705,402**	521,921
Other non-current assets		**11,114,449**	29,853,842
		7,386,548,244	6,837,742,766
Total assets		**11,744,807,401**	10,941,324,209

Hyundai Oilbank Co., Ltd. and Subsidiaries
Consolidated Statements of Financial Position, Continued
December 31, 2018 and 2017

(In thousands of Korean won)

	Notes	December 31, 2018	December 31, 2017
Liabilities			
Current liabilities			
Short-term financial liabilities	17	**1,573,656,843**	1,015,431,307
Financial liability at fair value through profit or loss	20	**23,911**	-
Derivative financial liabilities	20	**4,238,136**	52,125,144
Trade and other payables	16,32	**2,758,191,024**	2,485,296,334
Current tax liabilities	29	**71,146,385**	192,603,446
Provisions	19	**96,439,367**	2,535,000
Other current liabilities		**74,301,568**	49,707,202
		4,577,997,234	3,797,698,433
Non-current liabilities			
Long-term financial liabilities	17	**1,856,126,526**	1,860,017,024
Trade and other payables	16	**8,444,579**	7,963,539
Long-term provisions	19	**2,416,875**	4,061,800
Deferred income		**30,448,984**	29,293,634
Deferred tax liabilities	29	**138,354,248**	173,801,556
Other non-current liabilities		**6,957,112**	6,567,249
		2,042,748,324	2,081,704,802
Total liabilities		**6,620,745,558**	5,879,403,235
Equity attributable to owners of the Parent Company			
Share capital	21	**1,225,412,110**	1,225,412,110
Hybrid equity securities	22	**224,272,850**	224,272,850
Share premium		**1,698,271**	1,698,271
Accumulated other comprehensive income	23	**228,615,084**	214,828,147
Retained earnings	24	**3,109,867,157**	3,064,227,952
Non-controlling interest		**334,196,371**	331,481,644
Total equity		**5,124,061,843**	5,061,920,974
Total liabilities and equity		**11,744,807,401**	10,941,324,209

The above consolidated statements of nancial position should be read in conjunction with the accompanying notes.

Hyundai Oilbank Co., Ltd. and Subsidiaries
Consolidated Statements of Income
Years Ended December 31, 2018 and 2017

(In thousands of Korean won)

	Notes	2018	2017
Revenue	7,32	**21,503,643,132**	16,387,306,976
Cost of sales	26,32	**20,431,523,587**	14,830,724,480
Gross profit		**1,072,119,545**	1,556,582,496
Selling and administrative expenses	25, 26	**411,083,184**	418,749,926
Operating profit		**661,036,361**	1,137,832,570
Finance income	27	**47,807,134**	107,502,628
Finance costs	27	**175,506,965**	92,493,645
Other non-operating income	28	**246,537,620**	186,419,694
Other non-operating expenses	28	**335,349,419**	205,373,596
Share of profit of associates and joint ventures	12	**92,949,192**	99,066,800
Profit before income tax		**537,473,923**	1,232,954,451
Income tax expense	29	**133,666,562**	295,005,257
Profit for the year		**403,807,361**	937,949,194
Profit is attributable to:			
Owners of the Parent Company		**402,009,631**	861,802,708
Non-controlling interest		**1,797,730**	76,146,486
Basic earnings per share (in Korean won)	30	**1,596**	3,472

The above consolidated statements of nancial position should be read in conjunction with the accompanying notes.

Hyundai Oilbank Co., Ltd. and Subsidiaries
Consolidated Statements of Comprehensive Income
Years Ended December 31, 2018 and 2017

(In thousands of Korean won)

	2018	2017
Profit for the year	**403,807,361**	937,949,194
Other comprehensive income		
Items that that may be subsequently reclassified to profit or loss:		
Cash flow hedges	**14,603,590**	(4,664,653)
Share of other comprehensive income of associates	**111,297**	313,007
Exchange differences	**1,687,304**	(3,913,862)
Items that will not be reclassified to profit or loss:		
Remeasurements of net defined benefit liabilities	**(4,176,210)**	11,117,972
Share of other comprehensive loss of associates	**(9,582)**	(71,424)
Gain (loss) on revaluation of land	**-**	(9,364,075)
Other comprehensive income for the year	**12,216,399**	(6,583,035)
Total comprehensive income for the year	**416,023,760**	931,366,159
Total comprehensive income for the year is attributable to:		
Owners of the Parent Company	**413,309,033**	855,725,901
Non-controlling interest	**2,714,727**	75,640,258
	416,023,760	931,366,159

The above consolidated statements of nancial position should be read in conjunction with the accompanying notes.

Hyundai Oilbank Co., Ltd. and Subsidiaries
Consolidated Statements of Changes in Equity
Years Ended December 31, 2018 and 2017

(In thousands of Korean won)

	Share capital	Hybrid Equity securities	Share premium	Accumulated Other comprehensive Income	Retained Earnings	Non-controlling Interest	Total
Balance at January 1, 2017	1,225,412,110	224,272,850	1,698,271	232,162,893	2,496,033,711	255,841,386	4,435,421,221
Total comprehensive income for the period							
Profit for the period	-	-	-	-	861,802,708	76,146,486	937,949,194
Cash flow hedges	-	-	-	(3,883,295)	-	(781,358)	(4,664,653)
Remeasurements of net defined benefit liabilities	-	-	-	-	10,842,842	275,130	11,117,972
Share of other comprehensive income of associates and joint ventures	-	-	-	241,583	-	-	241,583
Exchange differences	-	-	-	(3,913,862)	-	-	(3,913,862)
Gain(loss) on revaluation of land	-	-	-	(9,779,172)	415,097	-	(9,364,075)
Transactions with owners							
Dividends	-	-	-	-	(294,098,906)	-	(294,098,906)
Dividends of hybrid equity securities	-	-	-	-	(10,767,500)	-	(10,767,500)
Balance at December 31, 2017	1,225,412,110	224,272,850	1,698,271	214,828,147	3,064,227,952	331,481,644	5,061,920,974
Balance at January 1, 2018	**1,225,412,110**	**224,272,850**	**1,698,271**	**214,828,147**	**3,064,227,952**	**331,481,644**	**5,061,920,974**
Total comprehensive income for the period							
Profit for the period	-	-	-	-	402,009,631	1,797,730	403,807,361
Cash flow hedges	-	-	-	13,446,706	-	1,156,884	14,603,590
Remeasurements of net defined benefit liabilities	-	-	-	-	(3,936,323)	(239,887)	(4,176,210)
Share of other comprehensive income of associates and joint ventures	-	-	-	101,715	-	-	101,715
Exchange differences	-	-	-	1,687,304	-	-	1,687,304
Gain(loss) on revaluation of land	-	-	-	(1,448,788)	1,448,788	-	-
Transactions with shareholders							
Dividends paid	-	-	-	-	(343,115,391)	-	(343,115,391)
Dividends of hybrid equity securities	-	-	-	-	(10,767,500)	-	(10,767,500)
Balance at December 31, 2018	**1,225,412,110**	**224,272,850**	**1,698,271**	**228,615,084**	**3,109,867,157**	**334,196,371**	**5,124,061,843**

The above consolidated statements of nancial position should be read in conjunction with the accompanying notes.

Hyundai Oilbank Co., Ltd. and Subsidiaries
Consolidated Statements of Cash Flows
Years Ended December 31, 2018 and 2017

(In thousands of Korean won)

	Notes	2018	2017
Cash flows from operating activities			
Cash generated from operations			
Profit for the period		**403,807,361**	937,949,194
Adjustments	31	**724,013,827**	602,587,202
Changes in operating assets and liabilities	31	**(173,119,953)**	(428,456,821)
		954,701,235	1,112,079,575
Interest received		**4,287,261**	4,995,080
Interest paid		**(98,812,196)**	(80,553,737)
Dividend received		**18,000,000**	-
Income tax paid		**(300,464,143)**	(246,294,778)
Net cash inflow from operating activities		**577,712,157**	790,226,140
Cash flows from investing activities			
Increase in short-term financial assets		**(12,019,926)**	(11,294,438)
Decrease in short-term financial assets		**15,903,091**	16,171,614
Decrease (increase) in financial assets at fair value through profit or loss		**(4,743,371)**	3,908,271
Decrease in long-term financial assets		**1,001,500**	2,500
Payment for acquisition of property, plant and equipment		**(758,966,940)**	(751,701,711)
Proceeds from disposal of property, plant and equipment		**6,705,877**	6,673,103
Payment for acquisition of intangible assets		**(20,338)**	(43,430)
Proceeds from disposal of intangible assets		**-**	354,545
Increase in loan and receivables		**(29,395,935)**	(14,998,734)
Collection of loans and receivables		**14,246,823**	16,626,535
Net cash outflow from investing activities		**(767,289,219)**	(734,301,745)

Hyundai Oilbank Co., Ltd. and Subsidiaries
Consolidated Statements of Cash Flows
Years Ended December 31, 2018 and 2017

(In thousands of Korean won)

	Notes	2018	2017
Cash flows from financing activities			
Proceeds from short-term financial liabilities		**10,114,361,624**	4,858,664,931
Repayments of short-term financial liabilities		**(9,600,694,052)**	(4,857,252,634)
Repayments of current portion of long-term financial liabilities		**(2,087,507)**	(17,027,096)
Repayments of current portion of bonds		**(320,000,000)**	(380,000,000)
Proceeds from Issuance of bonds		**348,634,720**	338,974,960
Proceeds from long-term financial liabilities		**16,700,000**	155,903,099
Dividends of hybrid capital securities		**(10,767,500)**	(10,767,500)
Dividends paid		**(343,115,391)**	(294,098,906)
Net cash inflow (outflow) from financing activities		**203,031,894**	(205,603,146)
Net increase (decrease) in cash and cash equivalents		**13,454,832**	(149,678,751)
Cash and cash equivalents at the beginning of the period		**148,231,468**	300,571,957
Effects of exchange rate changes on cash and cash equivalents		**951,721**	(2,661,738)
Cash and cash equivalents at the end of the period		**162,638,021**	148,231,468

The above consolidated statements of nancial position should be read in conjunction with the accompanying notes.

Notes to the Consolidated Financial Statements

December 31, 2018 and 2017

Hyundai Oilbank Co., Ltd. and Subsidiaries

1. General Information

Hyundai Oilbank Co., Ltd. (the Company) was established in 1964 to engage in the production and sale of petroleum products. The Company and its production facilities are located in Daesan, South Chungcheong Province. The Company and its subsidiaries (collectively referred to as "the Group") have a production capacity of 520,000 barrels per stream day (BPSD) in petroleum and 130,000 barrels per stream day (BPSD) in condensate processing.

As at December 31, 2018, Hyundai Heavy Industries Holdings Co., Ltd. (formerly, Hyundai Robotics Co., Ltd.) owns 91.13% of the Company's total outstanding shares. The shares of the Company held by Hyundai Heavy Industries Co., Ltd. were transferred to Hyundai Heavy Industries Holdings Co., Ltd. (formerly, Hyundai Robotics Co., Ltd.), a newly established entity through equity spin-off from Hyundai Heavy Industries Co., Ltd, on April 1, 2017. As a result, Hyundai Heavy Industries Holdings Co., Ltd. (formerly, Hyundai Robotics Co., Ltd.) became the Company's major shareholder.

The consolidated subsidiaries as at December 31, 2018 and 2017, are as follows:

Subsidiaries	Location	Ownership interest held by the Group (%)		Business
		December 31, 2018	December 31, 2017	
HDO Singapore Pte. Ltd.	Singapore	100%	100%	Petroleum trading
MS Dandy Ltd.	Marshall Islands	100%	100%	Ships leasing
Hyundai Oil Terminal Co., Ltd.	Korea	100%	100%	Oil storage industry
Hyundai Oilbank (Shanghai) Co., Ltd.	China	100%	100%	Petroleum trading
Hyundai Chemical Co., Ltd.	Korea	60%	60%	Crude petroleum refining
Grande Ltd.	Marshall Islands	100%	100%	Ships leasing
HYUNDAI OCI Co., Ltd.	Korea	51%	51%	Carbon black production

Notes to the Consolidated Financial Statements

December 31, 2018 and 2017

Summarized financial information for consolidated subsidiaries as at December 31, 2018 and 2017 and for the periods ended December 31, 2018 and 2017, is as follows:

(in thousands of Korean won)

Subsidiaries	December 31, 2018		2018	
	Assets	Liabilities	Sales	Profit (loss) for the period
HDO Singapore Pte. Ltd.	528,860,911	472,015,672	6,952,332,279	15,669,057
MS Dandy Ltd.	15,388,932	1,342	1,297,749	357,160
Hyundai Oil Terminal Co., Ltd.	126,412,248	14,473,456	39,266,655	8,314,116
Hyundai Oilbank (Shanghai) Co., Ltd.	27,112,973	24,437,947	151,003,802	(1,978,495)
Hyundai Chemical Co., Ltd.	1,882,677,202	1,185,913,599	4,152,627,249	(5,946,700)
Grande Ltd.	24,320,889	16,746,603	2,246,033	195,137
HYUNDAI OCI Co., Ltd.	270,414,059	156,347,681	136,120,826	8,606,103

(in thousands of Korean won)

Subsidiaries	December 31, 2017		2017	
	Assets	Liabilities	Sales	Profit (loss) for the period
HDO Singapore Pte. Ltd.	439,269,235	407,310,217	4,257,161,250	7,178,367
MS Dandy Ltd.	14,398,400	1,286	1,358,524	174,940
Hyundai Oil Terminal Co., Ltd.	121,472,920	11,745,280	32,887,166	6,874,821
Hyundai Oilbank (Shanghai) Co., Ltd.	50,770,806	46,135,356	271,571,301	(793,695)
Hyundai Chemical Co., Ltd.	2,032,676,533	1,332,304,467	3,373,580,260	186,559,707
Grande Ltd.	24,583,534	17,515,617	2,138,453	158,983
HYUNDAI OCI Co., Ltd	230,962,258	125,464,640	53,625,632	3,009,411

2. Significant Accounting Policies

The principal accounting policies applied in the preparation of these consolidated financial statements are set out below. These policies have been consistently applied to all the periods presented, unless otherwise stated.

2.1 Basis of Preparation

The Group maintains its accounting records in Korean won and prepares statutory financial statements in the Korean language (Hangul) in accordance with International Financial Reporting Standards as adopted by the Republic of Korea (Korean IFRS). The accompanying consolidated financial statements have been condensed, restructured and translated into English from the Korean language financial statements.

The consolidated financial statements of the Group have been prepared in accordance with Korean IFRS. These are the standards, subsequent amendments and related interpretations issued by the International Accounting Standards Board (IASB) that have been adopted by the Republic of Korea.

The preparation of financial statements requires the use of critical accounting estimates. Management also needs to exercise judgment in applying the Group's accounting policies. The areas involving a higher degree of judgment or complexity, or areas where assumptions and estimates are significant to the consolidated financial statements are disclosed in Note 3.

2.2 Changes in Accounting Policy and Disclosures

2.2.1 New and amended standards adopted by the Group

The Group has applied the following standards and amendments for the first time for their annual reporting period commencing January 1, 2018.

(1) Amendments to Korean IFRS 1028 Investments in Associates and Joint Ventures

When an investment in an associate or a joint venture is held by, or is held indirectly through, an entity that is a venture capital organization, or a mutual fund, unit trust and similar entities including investment-linked insurance funds, the entity may elect to measure that investment at fair value through profit or loss in accordance with Korean IFRS 1109. The amendments clarify that an entity shall make this election separately for each associate of joint venture, at initial recognition of the associate or joint venture. The Group does not believe the amendments had any significant impact on the consolidated financial statements because the Group is not a venture capital organization.

(2) Amendments to Korean IFRS 1040 Transfers of Investment Property

Paragraph 57 of Korean IFRS 1040 clarifies that a transfer to, or from, investment property, including property under construction, can only be made if there has been a change in use that is supported by evidence, and provides a list of circumstances as examples. The amendment will be effective for annual periods beginning on or after January 1, 2018, with early adoption permitted. The Group does not believe the amendment had any significant impact on the consolidated financial statements.

(3) Amendments to Korean IFRS 1102 Share-based Payment

Amendments to Korean IFRS 1102 clarify accounting for a modification to the terms and conditions of a share-based payment that changes the classification of the transaction from cash-settled to equity-settled. Amendments also clarify that the measurement approach should treat the terms and conditions of a cash-settled award in the same way as for an equity-settled award. The Group does not believe the amendments had any significant impact on the consolidated financial statements.

(4) Enactments to Interpretation 2122 Foreign Currency Transaction and Advance Consideration

According to these enactments, the date of the transaction for the purpose of determining the exchange rate to use on initial recognition of the related asset, expense or income (or part of it) is the date on which an entity initially recognizes the non-monetary asset or non-monetary liability arising from the payment or receipt of advance consideration. The Group does not believe the enactments had any significant impact on the consolidated financial statements.

(5) Enactments to Korean IFRS 1109 Financial Instruments

The Group has adopted Korean IFRS 1109, 'Financial Instruments', on January 1, 2018 as the initial application date. The comparative financial statements have not been restated in accordance with the transitional provisions of Korean IFRS 1109 and the details of the impact of adopting Korean IFRS 1109 are explained in note 33.

Notes to the Consolidated Financial Statements

December 31, 2018 and 2017

(6) Enactment of Korean IFRS 1115 Revenue from Contracts with Customers

The Group has adopted the Korean IFRS 1115, 'Revenue from Contracts with Customers'. The comparative financial statements have not been restated in accordance with the transitional provisions of Korean IFRS 1115 and the adoption of Korean IFRS 1115 has not had a material impact on the financial statements.

2.2.2 New standards and interpretations not yet adopted by the Group

Certain new accounting standards and interpretations that have been published that are not mandatory for annual reporting period commencing January 1, 2018 and have not been early adopted by the Group are set out below.

- Korean IFRS 1116 Leases

Korean IFRS 1116 Leases issued on May 22, 2017 is effective for annual periods beginning on or after January 1, 2019, with early adoption permitted. This standard will replace Korean IFRS 1017 Leases. The Group will apply K-IFRS 1116 from the fiscal year beginning on January 1, 2019.

The new standard requires the lessee to recognize assets and liabilities for all leases for which the lease term is greater than 12 months and the underlying asset does not have a low value when new. The lessee must recognize right-of-use asset and lease liability, which represents the obligation to pay the lease payments.

In assessing the financial impact of the initial adoption of Korean IFRS 1116, the Group is analyzing the impact on the financial statements for 2018 based on the information and available information as of December 31, 2018. It is difficult to provide a reasonable estimate of the financial impact before the Group completes the analysis.

2.3 Consolidation

The Group has prepared the consolidated financial statements in accordance with Korean IFRS 1110, Consolidated Financial Statements.

2.3.1 Subsidiaries

Subsidiaries are all entities over which the Group has control. The Group controls an entity when the Group is exposed to, or has rights to, variable returns from its involvement with the entity and has the ability to affect those returns through its power to direct the activities of the entity. Subsidiaries are fully consolidated from the date on which control is transferred to the Group. They are deconsolidated from the date that control ceases.

The acquisition method of accounting is used to account for business combinations by the Group. The consideration transferred is measured at the fair values of the assets transferred, and identifiable assets acquired and liabilities and contingent liabilities assumed in a business combination are measured initially at their fair values at the acquisition date. The Group recognizes any non-controlling interest in the acquired entity on an acquisition-by-acquisition basis either at fair value or at the non-controlling interest's proportionate share of the acquired entity's net identifiable assets. All other non-controlling interests are measured at fair values, unless otherwise required by other standards. Acquisition-related costs are expensed as incurred.

The excess of consideration transferred, amount of any non-controlling interest in the acquired entity and acquisition-date fair value of any previous equity interest in the acquired entity over the fair value of the net identifiable assets acquired is recorded as goodwill. If those amounts are less than the fair value of the net identifiable assets of the business acquired, the difference is recognized directly in the profit or loss as a bargain purchase.

Intercompany transactions, balances and unrealized gains on transactions between group companies are eliminated. Unrealized losses are also eliminated unless the transaction provides evidence of an impairment of the transferred asset. Accounting policies of subsidiaries have been changed where necessary to ensure consistency with the policies adopted by the Group.

2.3.2 Changes in ownership interests in subsidiaries without change of control

The Group treats transactions with non-controlling interests that do not result in a loss of control as transactions with equity owners of the Group. A changed in ownership interest results in an adjustment between the carrying amounts of the controlling and non-controlling interest to reflect their relative interest in the subsidiary. Any difference between the amount of the adjustment to non-controlling interest and any consideration paid or received is recognized in a separate reserve within equity attributable to owners of the Parent Company.

2.3.3 Disposal of subsidiaries

When the Group ceases to consolidate for a subsidiary because of a loss of control, any retained interest in the subsidiary is re-measured to its fair value with the changes in carrying amount recognized in profit or loss.

2.3.4 Associates

Associates are entities over which the Group has significant influence but not control or joint control. Investments in associates are accounted for using the equity method of accounting, after initially being recognized at cost. Unrealized gains on transactions between the Group and its associates are eliminated to the extent of the Group's interest in the associates. If there is objective evidence of impairment for the investment in the associate, the Group recognizes the difference between the recoverable amount of the associate and its book value as impairment loss.

2.3.5 Joint Arrangements

A joint arrangement, wherein two or more parties have joint control, is classified as either a joint operation or a joint venture. A joint operator recognizes its direct right to the assets, liabilities, revenues and expenses of joint operations and its share of any jointly held or incurred assets, liabilities, revenues and expenses. Interests in joint ventures are accounted for using the equity method, after initially being recognized at cost in the consolidated statement of financial position.

2.4 Foreign Currency Translation

2.4.1 Functional and presentation currency

Items included in the financial statements of each of the Group's entities are measured using the currency of the primary economic environment in which each entity operates (the "functional currency'). The consolidated financial statements are presented in Korean won, which is the Parent Company's functional and presentation currency.

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2.4.2 Transactions and balances

Foreign currency transactions are translated into the functional currency using the exchange rates at the dates of the transactions. Foreign exchange gains and losses resulting from the settlement of such transactions and from the translation of monetary assets and liabilities denominated in foreign currencies at year end exchange rates are generally recognized in profit or loss. Non-monetary items that are measured at fair value in a foreign currency are translated using the exchange rates at the date when the fair value was determined. Translation differences on assets and liabilities carried at fair value are reported as part of the fair value gain or loss.

2.4.3 Translation into the presentation currency

The results and financial position of foreign operations that have a functional currency different from the presentation currency are translated into the presentation currency as follows:

- assets and liabilities for each statement of financial position presented are translated at the closing rate at the end of the reporting period,
- income and expenses for each statement of income are translated at average exchange rates,
- all resulting exchange differences are recognized in other comprehensive income.

When foreign operations are wholly or partially sold, exchange differences recognized in equity are transferred to profit or loss in the statement of income. When the Group ceases to control the subsidiary, exchange differences that were recorded in equity are recognized in the statement of income as part of the gain or loss on sale.

Goodwill and fair value adjustments arising on the acquisition of a foreign entity are treated as assets and liabilities of the foreign entity and translated at the closing rate. Exchange differences arising are recognized in other comprehensive income.

2.5 Cash and cash equivalents

Cash and cash equivalents are composed of cash on hand, demand deposits and short-term, highly liquid investments that are readily convertible to known amounts of cash and which are subject to an insignificant risk of changes in value.

2.6 Financial Assets

The Group adopted Korean IFRS 1109, ‘Financial Instruments', effective from January 1, 2018.

2.6.1 Classification

The Group classifies financial assets into the following measurement categories:

- Financial assets recognized fair value through other comprehensive income,
- Financial assets recognized fair value through profit or loss,
- Financial assets recognized amortized cost.

The classification of financial assets is based on the business model in which the financial asset is managed and its contractual cash flow characteristics.

Gains or losses on financial assets measured at fair value are recognized in profit or loss or other comprehensive income. Investments in debt instruments are recognized in profit or loss or other comprehensive income in accordance with the business model in which the asset is held. The Group reclassifies debt instruments only if it changes the business model that manages financial assets.

The Group may make irrevocable election to designate that subsequent change in the fair value of investments in equity instruments other than short-term investments will be presented in other comprehensive income at initial recognition. Changes in the fair value of investments in undesignated equity instruments are recognized in profit or loss.

2.6.2 Measurement

The Group measures financial assets at their fair value at initial recognition. If financial assets are not financial assets recognized fair value through profit or loss, transaction costs that are directly attributable to the acquisition of that financial asset or to the issuance of that financial liability are added to the fair value of the financial assets. Transaction costs of financial assets recognized fair value through profit or loss are charged to profit or loss.

A composite contract that includes an embedded derivative considers the entire composite contract when determining whether contractual cash flows consist solely of principal and interest.

(1) Debt investment

Subsequent measurement of financial assets is based on the contractual cash flow characteristics of the financial asset and the business model for managing the financial asset. The Group classifies debt investment into three categories:

a. Amortization cost

Under a business model that is intended to hold to receive contractual cash flows, assets that hold financial assets and their contractual cash flows consist solely of principal and interest are recognized at amortized cost. The gain or loss on a financial asset measured at amortized cost, which is not subject to hedge accounting, is recognized in profit or loss when the financial asset is derecognized or impaired. Interest income on a financial asset recognized under the effective interest method is included in ‘financial income’.

b. Financial assets recognized at fair value through other comprehensive income

Under a business model that achieves the objective through both receipt of contractual cash flows and sale of financial assets, assets that hold financial assets and their contractual cash flows consist solely of principal payments are recognized at fair value through other comprehensive income. The gain or loss of financial assets recognized at fair value through other comprehensive income, except for impairment losses (reversals) and interest income and foreign exchange gains and losses, are recognized in other comprehensive income. When a financial asset is derecognized, the cumulative gain or loss previously recognized is reclassified from equity to profit or loss. Interest income on financial assets recognized under the effective interest method is included in ‘financial income’. Foreign exchange gains and losses are presented as ‘Other income or other expense’ and impairment loss is presented as ‘Other expense’.

c. Financial assets recognized at fair value through profit or loss

Debt instruments which are not financial assets recognized at amortization cost or financial assets recognized at fair value through other comprehensive income are measured at fair value through profit or loss. The gain or loss on financial assets recognized at fair value through profit or loss, which is not subject to hedge accounting, is recognized in profit or loss and are reported as ‘other income or other expenses’ in the statement of income in the period in which they arise.

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(2) Equity investment
The Group subsequently measures investment in all equity instruments at fair value. For equity investment for which changes in fair value are elected to be presented in other comprehensive income, the amounts recognized in other comprehensive income are not reclassified to profit or loss even when equity instruments are eliminated. Dividend income on these equity investment is recognized in profit or loss as 'financial income' when the entity's right to receive dividends is established.

Changes in the fair value of a financial asset recognized at fair value through profit or loss are presented as 'Other income or other expense' in the income statement. The impairment loss (reversal) of an equity investment measured at fair value through other comprehensive income is not separately recognized.

2.6.3 Impairment

The Group assesses expected credit losses on debt instruments recognized at amortized cost or fair value through other comprehensive income, based on forward-looking information. The method of impairment is determined by whether the credit risk increases significantly. However, for trade receivables, the Group applies the simplified method to recognize expected credit losses for the whole period from the date of initial recognition of the receivables.

2.6.4 Offsetting of financial instruments

Financial assets and liabilities are offset and the net amount is reported in the consolidated statements of financial position where there is a legally enforceable right to offset the recognized amounts and there is an intention to settle on a net basis or realize the assets and settle the liability simultaneously. The legally enforceable right must not be contingent on future events and must be enforceable in the normal course of business and in the event of default, insolvency or bankruptcy of the Group or the counterparty.

2.6.5 Derecognition

If a transfer does not result in derecognition because the Group has retained substantially all the risks and rewards of ownership of the transferred asset, the Group continues to recognize the transferred asset in its entirety and recognizes a financial liability for the consideration received. The Group classified the financial liability as “borrowings” in the statement of financial position.

2.7 Derivative Financial Instruments

Derivatives are initially recognized at fair value on the date when a derivative contract is entered into and are subsequently re-measured at their fair value at the end of each reporting period. Changes in the fair value of any derivative instrument that does not qualify for hedge accounting are recognized immediately in profit or loss within ‘other non-operating income (expenses)’ based on the nature of transactions.

2.8 Inventories

Inventories are stated at the lower of cost and net realizable value. Cost is determined using the moving average method (monthly average method) except Materials-in-transit.

2.9 Non-current Assets (or Disposal Group) Held for Sale

Non-current assets (or disposal group) are classified as held for sale when their carrying amount will be recovered principally through a sale transaction rather than through continuing use and a sale is considered highly probable. The assets are measured at the lower amount between their carrying amount and the fair value less costs to sell.

2.10 Property, Plant and Equipment

Land is shown at fair value based on valuations by external independent valuers. Valuations of land are made on regularity with which significant changes in fair value can occur, and a further revaluation is performed when the fair value of land differs materially from its carrying amount.

Property, plant and equipment are stated at cost less accumulated depreciation and accumulated impairment losses. Historical cost includes expenditure that is directly attributable to the acquisition of the items.

Land is not depreciated. Depreciation on assets is calculated using the straight-line method to allocate the difference between their cost and their residual values over their estimated useful lives, as follows:

	Useful lives
Buildings	25 - 50 years
Structures	25 - 50 years
Machinery	2 - 36 years
Vessels	15 years
Tools and fixtures	5 years
Vehicles	5 years
Others	2 - 6 years

The assets’ depreciation method, residual values and useful lives are reviewed, and adjusted if appropriate, at the end of each reporting period.

2.11 Borrowing Costs

General and specific borrowing costs that are directly attributable to the acquisition, construction or production of a qualifying asset are capitalized during the period of time that is required to complete and prepare the asset for its intended use or sale. Investment income earned on the temporary investment of specific borrowings pending their expenditure on qualifying assets is deducted from the borrowing costs eligible for capitalization. Other borrowing costs are expensed in the period in which they are incurred.

2.12 Intangible Assets

Goodwill is measured as described in Note 2.3.1, and carried at cost less accumulated impairment losses.

Intangible assets, except for goodwill, are initially recognized at its historical cost, and carried at cost less accumulated amortization and accumulated impairment losses.

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Software development costs that are directly attributable to internally generated by the Group are recognized when the criteria; such as, technically feasible, generate probable future economic benefits and other, are met. Membership rights that have an indefinite useful life are not subject to amortization because there is no foreseeable limit to the period over which the assets are expected to be utilized. The Group amortizes intangible assets with a limited useful life using the straight-line method over the following periods:

	Useful lives
Trademark and licenses, Development costs	4 - 20 years

2.13 Investment Property

Investment property is property held to earn rentals or for capital appreciation or both. An investment property is measured initially at its cost. An investment property is measured after initial measurement at depreciated cost (less any accumulated impairment losses). After recognition as an asset, investment property is carried at cost less accumulated depreciation and impairment losses. The Group depreciates investment properties, except for land, using the straight-line method over their useful lives of 25 to 50 years.

2.14 Impairment of Non-financial Assets

Goodwill and intangible assets that have an indefinite useful life are not subject to amortization and are tested annually for impairment. Other assets are tested for impairment whenever events or changes in circumstances indicate that the carrying amount may not be recoverable. An impairment loss is recognized for the amount by which the asset's carrying amount exceeds its recoverable amount. The recoverable amount is the higher of an asset's fair value less costs of disposal and value in use. Assets are grouped into the lowest level of group (cash generating unit) in which identifiable cash flow is generated to measure impairments. Non-financial assets other than goodwill that suffered impairment are reviewed for possible reversal of the impairment at the end of each reporting period.

2.15 Financial Liabilities

2.15.1 Classification and measurement

The Group's financial liabilities at fair value through profit or loss are financial instruments held for trading. A financial liability is held for trading if it is incurred principally for the purpose of repurchasing in the near term. A derivative that is not a designated as hedging instruments and an embedded derivative that is separated are also classified as held for trading.

The Group classifies non-derivative financial liabilities, except for financial liabilities at fair value through profit or loss, financial guarantee contracts and financial liabilities that arise when a transfer of financial assets does not qualify for derecognition, as financial liabilities carried at amortized cost and present as 'trade payables', 'borrowings', and 'other financial liabilities' in the statement of financial position.

Preferred shares that require mandatory redemption at a particular date are classified as liabilities. Interest expenses on these preferred shares using the effective interest method are recognized in the statement of income as 'finance costs', together with interest expenses recognized from other financial liabilities.

2.15.2 Derecognition

Financial liabilities are removed from the statement of financial position when it is extinguished; for example, when the obligation specified in the contract is discharged or cancelled or expired or when the terms of an existing financial liability are substantially modified.

2.16 Financial Guarantee Contract

Financial guarantee contracts are recognized as a financial liability at the time the guarantee is issued. The liability is initially measured at fair value, subsequently at the higher of the following;

- Provision determined in accordance with expected credit loss
- The amount initially recognized less cumulative revenue in accordance with Korean IFRS 1115 'Revenue from Contracts with Customers'.

The liability is recognized in the statement of financial position within 'other financial liabilities'.

2.17 Provisions and contingent liabilities

The Group recognize provisions when the Group has present obligations (legal or constructive) as a result of a past event; it is probable that an outflow of resources embodying economic benefits will be required to settle the obligation; and a reliable estimate can be made of the amount of the obligation.

Provisions are measured at the present value of management's best estimate of the expenditure required to settle the present obligation at the end of the reporting period, and the increase in the provision due to the passage of time is recognized as interest expense.

In addition, it is presented as contingent liability in case past events have occurred but if there is a potential obligation to confirm the existence by the occurrence of uncertain future events or in case there is a current obligation as a result of a past event or transaction but the possibility of the outflow of resources is not high or if the amount cannot be estimated reliably.

With enforcement of The Act on the Allocation and Trading of Greenhouse Gas Emission Permits, the allocation received from the government for free of charge are measured at zero while purchased emission permits are measured at acquisition cost and presented net of accumulated impairment loss. Emissions obligations are measured as the sum of the carrying amount of the allocated allowances that will be submitted to the government and the best estimate of expenditure required to settle the obligation at the end of reporting period for any excess emission. Emission permits and emission obligations are classified as intangible assets and provisions, respectively, in the statement of financial position.

2.18 Current and Deferred Income Tax

The tax expense for the period consists of current and deferred tax. Current and deferred tax is recognized in profit or loss, except to the extent that it relates to items recognized in other comprehensive income or directly in equity. In this case, the tax is also recognized in other comprehensive income or directly in equity, respectively. The tax expense is measured at the amount expected to be paid to the taxation authorities, using the tax rates (and tax laws) that have been enacted or substantively enacted by the end of the reporting period.

Management periodically evaluates positions taken in tax returns with respect to situations in which applicable tax regulation is subject to interpretation. The Group recognizes current income tax on the basis of amounts expected to be paid to the tax authorities.

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Deferred income tax is provided in full, using the liability method, on temporary differences arising between the tax bases of assets and liabilities and their carrying amounts in the consolidated financial statements. However, deferred income tax is not accounted for if it arises from initial recognition of an asset or liability in a transaction other than a business combination that at the time of the transaction affects neither accounting nor taxable profit or loss.

Deferred tax assets are recognized only if it is probable that future taxable amounts will be available to utilize those temporary differences and losses.

The Group recognizes a deferred tax liability all taxable temporary differences associated with investments in subsidiaries, associates, and interests in joint arrangements, except to the extent that the Group is able to control the timing of the reversal of the temporary difference and it is probable that the temporary difference will not reverse in the foreseeable future. In addition, The Group recognizes a deferred tax asset for all deductible temporary differences arising from such investments to the extent that it is probable the temporary difference will reverse in the foreseeable future and taxable profit will be available against which the temporary difference can be utilized.

Deferred tax assets and liabilities are offset when there is a legally enforceable right to offset current tax assets and liabilities and when the deferred tax balances relate to the same taxation authority. Current tax assets and tax liabilities are offset where the entity has a legally enforceable right to offset and intends either to settle on a net basis.

2.19 Contributed Equity

2.19.1 Equity Investments

Ordinary stocks are classified as equity and incremental cost occurred directly from equity transactions are deducted from equity as net amount including tax effect.

2.19.2 Hybrid Equity Securities

The Group classifies equity securities to financial liabilities or equity investments in accordance with its contract conditions. Hybrid equity securities which the Group has unconditional right to avoid transfer of financial assets, such as cash, to settle contractual liabilities are classified as equity investments and presented as a part of equity.

2.20 Earnings per Share

Basic earnings per share is profit or loss attributed to ordinary shareholder of the Group divided by the weighted average number of ordinary shares outstanding during the period.

Diluted earnings per share is profit or loss attributed to ordinary shareholder of the Group divided by the weighted average number of ordinary shares outstanding and weighted average number of dilutive potential ordinary shares of the Group during the period. Dilutive potential ordinary shares affect diluted earnings per share only when dilution occurs.

2.21 Employee Benefits

The Group operates a defined benefit plan.

A defined benefit plan is a pension plan that is not a defined contribution plan. Generally, post-employment benefits are payable after the completion of employment, and the benefit amount depended on the employee's age, periods of service or salary levels. The liability recognized in the statement of financial position in respect of defined benefit pension plans is the present value of the defined benefit obligation at the end of the reporting period less the fair value of plan assets. The defined benefit obligation is calculated annually by independent actuaries using the projected unit credit method. The present value of the defined benefit obligation is determined by discounting the estimated future cash outflows using interest rates of high-quality corporate bonds that are denominated in the currency in which the benefits will be paid, and that have terms approximating to the terms of the related obligation. Re-measurement gains and losses arising from experience adjustments and changes in actuarial assumptions are recognized in the period in which they occur, directly in other comprehensive income. Changes in the present value of the defined benefit obligation resulting from plan amendments or curtailments are recognized immediately in profit or loss as past service costs.

The asset recognized in the statement of financial position in respect of defined benefit pension plans is excess reserve which is the present value of the defined benefit obligation at the end of the reporting period less the fair value of plan assets and the asset is less than asset recognition limit.

Other long-term employee benefits that are not payable within twelve months from the end of periods in which the service is provided are the discounted present value of the future salary for the service provided in the period and the past. Re-measurement gains and losses are recognized in the period in which they occur, directly in profit and loss.

2.22 Revenue Recognition

The Group has adopted the Korean IFRS 1115, 'Revenue from Contracts with Customers' effective from January 1, 2018.

2.22.1 Identifying Performance Obligation

The Group engages in the production and sale of petroleum products and identify performance obligation from contracts with customers such as supply of goods in accordance with Korean IFRS 1115 'Revenue from Contracts with Customers'.

2.22.2 Variable Consideration and Allocating Transaction Price

The Group determines and allocates transaction prices to various performance obligations identified from a single contract based on relative individual sales price. Contracts with customers do not provide form of variable consideration.

2.23 Lease

A lease is an agreement, whereby the lessor conveys to the lessee, in return for a payment or series of payments, the right to use an asset for an agreed period of time. Leases in which a significant portion of the risks and rewards of ownership are not transferred to the Group are classified as operating leases. Payments made under operating leases are charge to profit or loss on a straight-line basis over the period of lease.

Leases where the Group, as lessee, has substantially all the risks and rewards of ownership are classified as finance leases. Finance leases are capitalized at the lease's inception at the fair value of the leased property or, if lower, the present value of the minimum lease payments. The corresponding rental obligations, net of finance charges, are included in other short-term and long-term payables. Each lease payment is allocated between the liability and finance cost.

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If the Group is a lessor, a lease is classified as a finance lease if it transfers substantially all the risks and rewards incidental to ownership at the inception of the lease. A lease other than a finance lease is classified as an operating lease. Lease income from operating leases is recognized in income on a straight-line basis over the lease term. Initial direct costs incurred by the lessor in negotiating and arranging an operating lease is added to the carrying amount of the leased asset and recognized as an expense over the lease term on the same basis as the lease income.

2.24 Government Grants

Government grants are recognized at fair value when there is reasonable assurance that the Group will comply with the conditions attaching to them and the grants will be received. Grants related to income are deferred and recognized in the statement of financial position in the period in which the purpose of grant and related income and expense corresponds. Government grants related to acquisition of specific assets is accounted as deferred income and deferred income related government grants is amortized over useful life of related asset and recognized in profit or loss.

2.25 Segment Reporting

Information of each operating segment is reported in a manner consistent with the internal business segment reporting provided to the chief operating decision-maker (Note 7). The chief operating decision-maker, who is responsible for allocating resources and assessing performance of the operating segments, has been identified as the steering committee that makes strategic decisions.

2.26 Approval of Issuance of the Financial Statements

The consolidated financial statements as of and for the period ended December 31, 2018 were approved for issue by the Board of Directors on January 28, 2019, It is possible to be amended and approved in the regular general meeting of shareholders.

3. Critical Accounting Estimates and Judgments

The preparation of financial statements requires the Group to make estimates and assumptions concerning the future. Estimates and judgments are continually evaluated and are based on historical experience and other factors, including expectations of future events that are believed to be reasonable under the circumstances. The resulting accounting estimates will, by definition, seldom equal the related actual results. The estimates and assumptions that have a significant risk of causing a material adjustment to the carrying amounts of assets and liabilities within the next financial year are discussed below.

3.1 Estimated Goodwill Impairment

The Group tests whether goodwill has suffered any impairment on an annual basis. The recoverable amount of a cash generating unit (CGU) is determined based on value-in-use calculations. The calculations are based on estimations.

3.2 Useful Lives of Property, Plant and Equipment

The Group determines the estimated useful lives and related depreciation expenses of property, plant and equipment such as machinery. The estimation is based on the expected cycles of the products and it can vary depending on the behavior of the competitors to respond to changes in the technical and industrial cycles. When there is a reduction in useful lives the management will increase depreciation expense accordingly. Also, when assets are abandoned, disposed or obsolete, its value can be reduced or removed from the book.

3.3 Income Taxes

The Group recognized expected future income tax and deferred tax generated from operations during the period, which is the result of best estimation. However, it is possible that actual future final income tax might not be equivalent to related assets and liabilities. This difference can affect income tax and deferred tax assets or liabilities when ultimate tax effect is determined (Note 29).

3.4 Provisions

As at December 31, 2018, the Group recognizes provisions for environmental restoration as explained in Note 19. These provisions are estimated based on past experience.

3.5 Customer Loyalty Programme

The Group operates a customer loyalty programme and the granted reward to the customer from the program is a separately identifiable component of the initial sale transaction that grants the reward. The allocation of the reward portion is estimated based on the past experience.

3.6 Net Defined Benefit Liability

The present value of net defined benefit liability depends on a number of factors that are determined on an actuarial basis using a number of assumptions including the discount rate (Note 18).

3.7 Fair Value of Financial Instrument

The Group determines the fair value of financial instruments which are not traded in active market using various evaluation methods and assumptions based on principal market conditions as of December 31, 2018.

4. Financial Risk Management

4.1 Financial Risk Factors

Due to the Group's activities, the Group is exposed to a variety of financial risks: market risk (including currency risk, fair value interest rate risk, cash flow interest rate risk and price risk), credit risk and liquidity risk. The Group's overall risk management program focuses on the unpredictability of financial markets and seeks to minimize any adverse effects on the financial performance of the Group. The Group uses derivative financial instruments to hedge certain risk exposures.

Risk management is carried out under policies approved by the Board of Directors. The Board reviews and approves written principles for overall risk management, as well as written policies covering specific areas, such as foreign exchange risk, interest rate risk, credit risk, use of derivative financial instruments and non-derivative financial instruments and investment of excess liquidity.

4.1.1 Market Risk

(1) Foreign exchange risk

The Group operates internationally and is exposed to foreign exchange risk arising from various currency exposures, primarily with respect to the US dollar. Foreign exchange risk arises from future commercial transactions and recognized assets and liabilities. The Group's risk management policy is to hedge the risk of changes in currency from foreign currency assets and liabilities through derivatives such as forward exchange contracts, and others.

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The Group's financial assets and liabilities exposed to foreign currency risk as at December 31, 2018 and 2017 are as follows:

(in thousands of Korean won)

December 31, 2018	USD	EUR	JPY	Others	Total
Cash and cash equivalents	4,679,217	-	-	16,574	**4,695,791**
Trade receivables	471,881,110	-	-	-	**471,881,110**
Other receivables	4,784,033	-	-	-	**4,784,033**
	481,344,360	**-**	**-**	**16,574**	**481,360,934**
Trade payables	(1,138,090,389)	(60,643)	-	-	**(1,138,151,032)**
Other payables	(10,279,804)	-	(40,309)	(1,107)	**(10,321,220)**
Financial liabilities	(819,167,546)	**-**	**-**	**-**	**(819,167,546)**
	(1,967,537,739)	**(60,643)**	**(40,309)**	**(1,107)**	**(1,967,639,798)**

(in thousands of Korean won)

December 31, 2017	USD	EUR	JPY	GBP	Total
Cash and cash equivalents	518,631	-	-	-	**518,631**
Trade receivables	867,840,272	-	-	-	**867,840,272**
Other receivables	15,954,285	-	-	-	**15,954,285**
	884,313,188	**-**	**-**	**-**	**884,313,188**
Trade payables	(1,456,210,207)	(108,002)	(1,516,096)	-	**(1,457,834,305)**
Other payables	(4,466,187)	(151,251)	(242,522)	-	**(4,859,960)**
Financial liabilities	(649,477,045)	-	-	-	**(649,477,045)**
	(2,110,153,439)	**(259,253)**	**(1,758,618)**	**-**	**(2,112,171,310)**

The effect of foreign currency risk to profit is a sum of net foreign currency fluctuations of Korean won against other foreign currency fluctuations. Hedge effectiveness on derivative instruments has not been reflected. As at December 31, 2018 and 2017, if the foreign exchange rate of the Korean won (KRW ₩ Foreign Currency) fluctuated by 5% while other variables held constant, the effects on profit would be as follows:

(in thousands of Korean won)

	2018		2017	
	5% Increase	5% Decrease	5% Increase	5% Decrease
Foreign currency assets	24,068,047	(24,068,047)	44,215,659	(44,215,659)
Foreign currency liabilities	(98,381,990)	98,381,990	(105,608,565)	105,608,565
Net effect	(74,313,943)	74,313,943	(61,392,906)	61,392,906

(2) Price risk

The Group is exposed to price risk of financial instruments because of investments held by the Group and classified on the statement of financial position either as available-for-sale or at fair value through profit or loss.

(3) Interest rate risk

The Group's cash flow interest rate risk arises from long-term borrowings. Borrowings issued at variable rates expose the Group to cash flow interest rate risk which is partially offset by cash held at variable rates.

As at December 31, 2018, if interest rates on Korean won-denominated borrowings were 0.1%(10 basis points) higher/lower with all other variables held constant, comprehensive income for the period would be ₩ 318,538 thousand (2017: ₩ 242,707 thousand) lower/higher, mainly as a result of higher/lower interest expense on long-term floating rate borrowings.

4.1.2 Credit Risk

Credit risk is managed on a Group basis. Credit risk arises from cash and cash equivalents, derivative financial instruments and deposits with banks and financial institutions, as well as credit exposures to wholesale and retail customers, including outstanding receivables and committed transactions. For banks and financial institutions, only independently rated parties with a minimum rating of 'A' are accepted. If wholesale customers are independently rated, these ratings are used. If there is no independent rating, the credit quality of the customer is evaluated taking into account its financial position, past experience and other factors. Individual risk limits are set based on internal or external ratings in accordance with limits set by the board. The utilization of credit limits is regularly monitored.

The maximum exposure to credit risk as at December 31, 2018 and 2017 is as follows:

(1) Book amount

(In thousands of Korean won)

	December 31, 2018	December 31, 2017
Cash and cash equivalents	162,486,188	147,752,722
Short-term financial instruments	6,300,000	10,183,166
Financial asset at fair value through profit or loss	210,024	-
Derivative financial assets	13,082,543	43,847,366
Trade and other receivables	1,162,221,265	1,694,497,926
Long-term financial assets	1,023,000	2,024,500
Long-term trade and other receivables	129,322,184	114,143,596
Financial guarantee contracts	8,385,750	16,071,000
Total	**1,483,030,954**	**2,028,520,276**

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The maximum credit exposure amount is equivalent to total financial assets, less cash and equity securities. The Group is exposed to credit risk up to the maximum amount of payment guarantee provided to subsidiaries (Note 32).

(2) Each region of the maximum exposure to credit risk

(In thousands of Korean won)

	December 31, 2018	December 31, 2017
Korea	924,741,931	1,112,661,061
North America	26,524,424	10,431,270
Asia	515,379,660	855,645,744
Europe	8,213,946	5,457,015
Others	8,170,993	44,325,186
Total	**1,483,030,954**	**2,028,520,276**

4.1.3 Liquidity Risk

The Group monitors rolling forecasts of the Group's liquidity requirements to ensure it has sufficient cash to meet operational needs while maintaining sufficient headroom on its undrawn committed borrowing facilities at all times so that the Group does not breach borrowing limits or covenants (where applicable) on any of its borrowing facilities. The Group's liquidity management policy involves projecting cash flows in major currencies and considering the level of liquid assets necessary to meet these, monitoring balance sheet liquidity ratios against internal and external regulatory requirements and maintaining debt financing plans.

The analyses of the Group's liquidity risk as at December 31, 2018 and 2017, are as follows:

(1) December 31, 2018

(in thousands of Korean won)

	Book amount	Contractual cash flow(*1)	Maturity			
			Less than 6 months	Between 6 months and 1 year	Between 1 and 3 years	Over 3 years
Short-term financial liabilities	1,573,656,843	1,582,497,790	1,136,189,718	446,308,072	-	-
Financial asset at fair value through profit or loss	23,911	23,911	23,911	-	-	-
Trade payables and other liabilities	2,102,296,526	2,102,296,525	1,745,088,781	357,207,744	-	-
Long-term financial liabilities	1,856,126,526	1,389,025,052	124,655,140	28,359,162	420,240,874	815,769,876
Long-term trade payables and other liabilities	8,444,579	8,444,579	-	-	-	8,444,579
Derivative financial liabilities designated as hedged items	4,238,136	4,238,136	4,238,136	-	-	-
Financial guarantee contracts	-	8,385,750	8,385,750	-	-	-

(*1) Includes interest amount to be paid and does not include present value discount.

(2) December 31, 2017

(in thousands of Korean won)

	Book amount	Contractual cash flow(*1)	Maturity			
			Less than 6 months	Between 6 months and 1 year	Between 1 and 3 years	Over 3 years
Short-term financial liabilities	1,015,431,307	1,018,970,811	1,017,935,280	1,035,531	-	-
Trade payables and other liabilities	2,485,296,334	2,485,296,334	2,485,296,334	-	-	-
Long-term financial liabilities	1,860,017,024	2,097,351,459	125,415,823	27,091,243	775,017,727	1,169,826,666
Long-term trade payables and other liabilities	7,963,539	7,963,539	-	-	7,963,539	-
Derivative financial liabilities designated as hedged items	52,125,144	52,125,144	52,125,144	-	-	-
Financial guarantee contracts	-	16,071,000	16,071,000	-	-	-

(*1) Includes interest amount to be paid and does not include present value discount.

4.2 Capital Management

The Group's objectives when managing capital are to safeguard the Group's ability to continue as a going concern in order to provide returns for shareholders and benefits for other stakeholders and to maintain an optimal capital structure to reduce the cost of capital.

In order to maintain or adjust the capital structure, the Group may adjust the amount of dividends paid to shareholders, return capital to shareholders, issue new shares or sell assets to reduce debt.

The Group monitors capital on the basis of the gearing ratio. This ratio is calculated as net debt divided by total capital. Net debt is total borrowings (including 'short and long-term borrowings' as shown in the consolidated statement of financial position) less cash and cash equivalents. Total capital is 'equity' as shown in the consolidated statement of financial position plus net debt.

The gearing ratios as at December 31, 2018 and 2017 are as follows:

(In thousands of Korean won)

	December 31, 2018	December 31, 2017
Total borrowings	3,429,783,369	2,875,448,331
Less: cash and cash equivalents	(162,638,021)	(148,231,468)
Net debt	3,267,145,348	2,727,216,863
Total equity	5,124,061,843	5,061,920,974
Total capital	8,391,207,191	7,789,137,837
Gearing ratio	39%	35%

Notes to the Consolidated Financial Statements

December 31, 2018 and 2017

4.3 Offsetting Financial Assets and Financial Liabilities

The following table presents the recognized financial assets that are offset, or subject to enforceable master netting arrangements and other similar agreements but not offset, as at December 31, 2018 and 2017.

(1) December 31, 2018

(in thousands of Korean won)

	Gross liabilities	Gross assets set off	Net amounts presented in the statement of financial position	Amounts not offset		Net amount
				Financial instruments	Cash collateral	
Other payables	24,322,129	3,090,476	21,231,653	-	-	21,231,653

(2) December 31, 2017

(in thousands of Korean won)

	Gross liabilities	Gross assets set off	Net amounts presented in the statement of financial position	Amounts not offset		Net amount
				Financial instruments	Cash collateral	
Other payables	18,544,187	11,529,884	7,014,303	-	-	7,014,303

5. Fair Value

5.1 Fair Value of Financial Instruments by Category

Carrying amount and fair value of financial instruments by category as at December 31, 2018 and 2017, are as follows:

(in thousands of Korean won)

	December 31, 2018		December 31, 2017	
	Carrying amount	Fair value	Carrying amount	Fair value
Financial assets[*1,2]				
Financial assets at fair value through profit or loss	210,024	210,024	-	-
Derivative financial assets	13,082,543	13,082,543	43,847,366	43,847,366
Financial liabilities[*2]				
Financial liabilities at fair value through profit or loss	23,911	23,911	-	-
Derivative financial liabilities	4,238,136	4,238,136	52,125,144	52,125,144

[*1] Equity instruments that do not have a quoted price in an active market are measured at cost because their fair value cannot be measured reliably and excluded from the fair value disclosures.
[*2] Short-term trade receivables and payables whose carrying amount is a reasonable approximation of fair value are excluded from the fair value disclosures.

5.2 Fair Value Hierarchy

Financial instruments that are measured at fair value are categorized by the fair value hierarchy, and the defined levels are as follows:

- Quoted prices (unadjusted) in active markets for identical assets or liabilities (Level 1).
- All inputs other than quoted prices included in level 1 that are observable (either directly that is, prices, or indirectly that is, derived from prices) for the asset or liability (Level 2).
- Unobservable inputs for the asset or liability (Level 3).

Fair value hierarchy classifications of the financial instruments that are measured at fair value as at December 31, 2018 and 2017, are as follows:

(1) December 31, 2018

(in thousands of Korean won)

	Level 1	Level 2	Level 3	Total
Financial assets/liabilities that are measured at fair value				
Financial assets at fair value through profit or loss	-	210,024	-	**210,024**
Financial liabilities at fair value through profit or loss	-	23,911	-	**23,911**
Derivative financial assets	-	13,082,543	-	**13,082,543**
Derivative financial liabilities	-	4,238,136	-	**4,238,136**

(2) December 31, 2017

(in thousands of Korean won)

	Level 1	Level 2	Level 3	Total
Financial assets/liabilities that are measured at fair value				
Derivative financial assets	-	43,847,366	-	**43,847,366**
Derivative financial liabilities	-	52,125,144	-	**52,125,144**

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5.3 Valuation Technique and the Inputs

Valuation techniques and inputs used in the recurring fair value measurements categorized within Level 2 of the fair value hierarchy as at December 31, 2018 and 2017, are as follows:

(1) December 31, 2018

(in thousands of Korean won)

	Fair value	Level	Valuation techniques
Financial assets at fair value through profit or loss			
Commodity forward contracts	210,024	2	Present value technique
Derivative assets			
Commodity forward contracts	13,082,543	2	Present value technique
Financial liabilities at fair value through profit or loss			
Commodity forward contracts	23,911	2	Present value technique
Derivative liabilities			
Commodity forward contracts	4,238,136	2	Present value technique

(2) December 31, 2017

(in thousands of Korean won)

	Fair value	Level	Valuation techniques
Derivative assets			
Commodity forward contracts	43,847,366	2	Present value technique
Derivative liabilities			
Commodity forward contracts	52,125,144	2	Present value technique

6. Financial Instruments by Category

6.1 Carrying Amounts of Financial Instruments by Category

Categorizations of financial assets and liabilities as at December 31, 2018, are as follows:

(1) December 31, 2018

(in thousands of Korean won)

	Amortized cost	Financial liabilities at fair value through profit or loss	Cash flow hedging instrument	Total
Cash and cash equivalents	162,638,021	-	-	162,638,021
Short-term financial assets	6,300,000	-	-	6,300,000
Financial assets at fair value through profit or loss	-	210,024	-	210,024
Derivative financial assets	-	-	13,082,543	13,082,543
Trade receivables and other receivables[*1]	1,291,543,449	-	-	1,291,543,449
Long-term financial assets	1,023,000	-	-	1,023,000
	1,461,504,470	**210,024**	**13,082,543**	**1,474,797,037**

[*1] Assets that are not based on contracts are excluded.

(in thousands of Korean won)

	Amortized cost	Financial liabilities at fair value through profit or loss	Cash flow hedging instrument	Total
Short-term financial liabilities	1,573,656,843	-	-	1,573,656,843
Financial liabilities at fair value through profit or loss	-	23,911	-	23,911
Derivative financial liabilities	-	-	4,238,136	4,238,136
Trade payables and other payables[*1]	2,110,741,105	-	-	2,110,741,105
Long-term financial liabilities	1,856,126,526	-	-	1,856,126,526
	5,540,524,474	**23,911**	**4,238,136**	**5,544,786,521**

[*1] Assets that are not based on contracts are excluded.

Notes to the Consolidated Financial Statements

December 31, 2018 and 2017

Categorizations of financial assets and liabilities as at December 31, 2017, are as follows:

(2) December 31, 2017

(in thousands of Korean won)

	Loans and receivables	Available-for-sale financial assets	Other financial assets(*1)	Total
Cash and cash equivalents	148,231,468	-	-	148,231,468
Short-term financial assets	10,183,166	-	-	10,183,166
Available-for-sale financial assets	-	3,000,000	-	3,000,000
Derivative financial assets	-	-	43,847,366	43,847,366
Trade receivables and other receivables	1,808,641,522	-	-	1,808,641,522
Long-term financial assets	2,024,500	-	-	2,024,500
	1,969,080,656	**3,000,000**	**43,847,366**	**2,015,928,022**

(*1) Other financial assets include derivative instruments designated as hedged items that are not subject to the categorization.

(in thousands of Korean won)

	Financial liabilities at amortized cost	Other financial liabilities(*1)	Total
Short-term financial liabilities	1,015,431,307	-	1,015,431,307
Derivative financial liabilities	-	52,125,144	52,125,144
Trade payables and other payables (*1)	2,493,259,873	-	2,493,259,873
Long-term financial liabilities	1,860,017,024	-	1,860,017,024
	5,368,708,204	**52,125,144**	**5,420,833,348**

(*1) Other financial liabilities include derivative instruments designated as hedged items that are not subject to the categorization.

6.2 Net gains or Losses by Category of Financial Instruments

Net gains or net losses on each category of financial instruments for the periods ended December 31, 2018 and 2017, are as follows:

(1) 2018

(in thousands of Korean won)

	Amortized cost	Financial assets at fair value through profit or loss	Financial liabilities at fair value through profit or loss	Total
Interest income	4,324,936	-	-	4,324,936
Gain on valuation of financial assets at fair value through profit or loss	-	210,024	-	210,024
Gain on disposal of financial assets at fair value through profit or loss	-	4,233,460	-	4,233,460
Gain on foreign currency translation	12,963,939	-	-	12,963,939
Gain on foreign currency transactions	225,678,882	-	-	225,678,882
Interest expense	(92,235,636)	-	-	(92,235,636)
Loss on sales of trade receivables	(6,330,360)	-	-	(6,330,360)
Loss on valuation of financial assets at fair value through profit or loss	-	-	(23,911)	(23,911)
Loss on disposal of financial assets at fair value through profit or loss	-	(1,227,911)	(7,748,920)	(8,976,831)
Loss on foreign currency translation	(5,142,640)	-	-	(5,142,640)
Loss on foreign currency transactions	(283,617,122)	-	-	(283,617,122)
Provision for impairment	(418,980)	-	-	(418,980)

(2) 2017

(in thousands of Korean won)

	Financial assets at fair value through profit or loss	Loans and receivables	Financial liabilities at fair value through profit or loss	Financial liabilities at amortized cost	Total
Interest income	-	4,957,019	-	-	4,957,019
Gain on disposal of financial assets at fair value through profit or loss	6,272,792	-	-	-	6,272,792
Gain on foreign currency translation	-	464,019	-	38,116,568	38,580,587
Gain on foreign currency transactions	-	28,481,771	-	199,310,353	227,792,124
Reversal of provision for impairment	-	332,534	-	-	332,534
Interest expense	-	-	-	(77,196,426)	(77,196,426)
Loss on disposal of financial assets at fair value through profit or loss	-	-	(2,645,079)	-	(2,645,079)
Loss on foreign currency translation	-	(14,370,771)	-	(2,467,431)	(16,838,202)
Loss on foreign currency transactions	-	(128,971,005)	-	(52,233,438)	(181,204,443)

Notes to the Consolidated Financial Statements

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7. Segment Information

Breakdown of the Group's segment revenue for the periods ended December 31, 2018 and 2017, are as follows:

(In thousands of Korean won)

	2018	2017
Sale of goods	21,373,861,140	16,260,024,775
Others	129,781,992	127,282,201
	21,503,643,132	**16,387,306,976**

Major customer information for the periods ended December 31, 2018 and 2017, is as follows:

(In thousands of Korean won)

	2018	2017
Sale of goods		
Major customer (*1)	2,164,274,121	1,700,426,350

(*1) Customers who contribute more than 10% of the Group's revenue

8. Restricted Financial Instruments

As at December 31, 2018, deposit for current accounts which is classified as long-term financial asset, amounting to ₩ 23 million (2017: ₩ 24.5 million) is restricted.

9. Available-for-sale Financial Assets

Available-for-sale financial assets as at December 31, 2018 and 2017, are as follows:

(In thousands of Korean won)

	December 31, 2018	December 31, 2017
Investment (unlisted) (*1)	-	3,000,000

(*1) Since the range of reasonable fair value estimates is significant and the probabilities of the various estimates cannot be reasonably assessed, these instruments are measured at cost.

Changes in available-for-sale financial assets for the periods ended December 31, 2018 and 2017, are as follows:

(In thousands of Korean won)

	2018	2017
Beginning balance	3,000,000	3,000,000
Acquisition	-	-
Disposal	(3,000,000)	-
Ending balance	-	3,000,000

10. Trade and Other Receivables

Trade and other receivables as at December 31, 2018 and 2017, are as follows:

(In thousands of Korean won)

	December 31, 2018	December 31, 2017
Trade receivables(*1)	1,033,994,395	1,533,861,052
Other receivables	308,815,122	140,851,505
Accrued income	5,154,397	19,314,458
Deposits	551,340	470,911
	1,348,515,254	**1,694,497,926**

(*1) As at December 31, 2018, trade receivables that were transferred but have not matured yet amount to ₩ 549,403 million (2017: ₩ 106,000 million). The Group transferred the receivables to DBS bank and substantially all the risks and rewards were transferred. As a result, the transaction has been accounted for disposal of trade receivables (Note 19).

The aging analysis of trade receivables as at December 31, 2018 and 2017, are as follows:

(In thousands of Korean won)

	December 31, 2018	December 31, 2017
Trade receivables not past due	1,322,844,353	1,669,777,544
Trade receivables past due but not impaired (*1)		
Less than 6 month	23,779,225	24,346,456
Over 6 months	1,891,676	373,926
Trade receivables impaired (*2)		
Up to 1 year	326,788	-
Over 1 year	39,092	-
	1,348,881,134	**1,694,497,926**

(*1) Trade receivables that are temporarily overdue.
(*2) Total trade receivables impaired less the recoverable amount (receivables pledged as collateral) is set as provisions for impairment.

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Details of long-term trade and other receivables of the Group as at December 31, 2018 and 2017, are as follows:

(In thousands of Korean won)

	December 31, 2018	December 31, 2017
Long-term loans	65,847,251	58,607,433
Deposits	63,474,933	55,536,163
	129,322,184	**114,143,596**

Movements in provisions for impairment of trade and other receivables for the periods ended December 31, 2018 and 2017, are as follows:

(In thousands of Korean won)

	2018	2017
Beginning balance	349,919	769,401
Impairment loss on trade receivables (Reversal)	418,980	(332,534)
Receivables written off during the period as uncollectible	(53,100)	(86,948)
Ending balance	**715,799**	**349,919**

11. Inventories

(1) Inventories as at December 31, 2018 and 2017, are as follows:

(In thousands of Korean won)

	December 31, 2018	December 31, 2017
Products	43,430,589	22,492,941
Finished goods	368,609,203	276,763,197
Work in process	198,849,412	154,908,052
Raw materials	677,383,605	512,590,423
Supplies	37,232,277	32,489,266
Materials-in-transit	1,414,721,028	1,119,727,059
	2,740,226,114	**2,118,970,938**

(2) Details of cost of inventories recognized for the periods ended December 31, 2018 and 2017, are as follows:

(In thousands of Korean won)

	2018	2017
Cost of inventories (cost of sales)	19,476,183,190	13,942,647,970
Loss on valuation of inventory (reversal)	138,463,410	3,617,656

12. Investments in Associates and Joint Ventures

Investments in joint ventures as at December 31, 2018 and 2017, are as follows:

(in thousands of Korean won)

	Country	Ownership (%)	December 31, 2018		December 31, 2017	
			Acquisition cost	Book amount	Acquisition cost	Book amount
Joint Ventures						
Hyundai Cosmo Petrochemical Co., Ltd.	Korea	50	316,100,000	258,351,940	316,100,000	196,909,833
Hyundai and Shell Base Oil Co. Ltd.	Korea	60	78,000,000	198,727,079	78,000,000	185,118,279
			394,100,000	**457,079,019**	**394,100,000**	**382,028,112**

Details of valuation of investments in associates and joint ventures that are accounted for using the equity method for the periods ended December 31, 2018 and 2017, are as follows:

(1) 2018

(in thousands of Korean won)

	Beginning	Acquisition	Share of profit of joint ventures	Share of other comprehensive income of joint ventures	Disposal	Dividends received	Ending
Joint Ventures							
Hyundai Cosmo Petrochemical Co., Ltd.	196,909,833	-	61,340,122	101,985	-	-	258,351,940
Hyundai and Shell Base Oil Co. Ltd.	185,118,279	-	31,609,070	(270)	-	(18,000,000)	198,727,079
	382,028,112	**-**	**92,949,192**	**101,715**	**-**	**(18,000,000)**	**457,079,019**

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(2) 2017

(in thousands of Korean won)

	Beginning	Acquisition	Share of profit of joint ventures	Share of other comprehensive income of joint ventures	Disposal	Dividends received	Ending
Joint Ventures							
Hyundai Cosmo Petrochemical Co., Ltd.	158,333,920	-	38,352,497	223,416	-	-	196,909,833
Hyundai and Shell Base Oil Co. Ltd.	154,385,808	-	60,714,303	18,168	-	(30,000,000)	185,118,279
	312,719,728	**-**	**99,066,800**	**241,584**	**-**	**(30,000,000)**	**382,028,112**

Elimination of unrealized gains and losses for the periods ended December 31, 2018 and 2017, is as follows:

(1) 2018

(in thousands of Korean won)

	Transaction	Beginning	Increased	Realized	Ending
Joint Ventures					
Hyundai Cosmo Petrochemical Co., Ltd.	Disposal of PP&E	(112,309,266)	-	296,562	(112,012,704)
	Sale of inventories	(1,541,440)	(1,517,198)	1,541,440	(1,517,198)
Hyundai and Shell Base Oil Co., Ltd.	Disposal o PP&E	(113,003)	-	-	(113,003)
	Sale of inventories	(1,804,390)	(939,635)	1,804,390	(939,635)
		(115,768,099)	**(2,456,833)**	**3,642,392**	**(114,582,540)**

(2) 2017

(in thousands of Korean won)

	Transaction	Beginning	Increased	Realized	Ending
Joint Ventures					
Hyundai Cosmo Petrochemical Co., Ltd.	Disposal of PP&E	(112,832,057)	-	522,791	(112,309,266)
	Sale of inventories	(1,385,238)	(1,541,440)	1,385,238	(1,541,440)
Hyundai and Shell Base Oil Co., Ltd.	Disposal o PP&E	(113,003)	-	-	(113,003)
	Sale of inventories	(1,182,361)	(1,804,390)	1,182,361	(1,804,390)
		(115,512,659)	**(3,345,830)**	**3,090,390**	**(115,768,099)**

Financial information of the investees as at and for the period ended December 31, 2018, is as follows:

(3) December 31, 2018

(in thousands of Korean won)

Joint Ventures	Assets	Liabilities	Sales	Profit for the period
Hyundai Cosmo Petrochemical Co., Ltd.	1,355,402,870	611,639,187	2,989,275,339	122,038,636
Hyundai and Shell Base Oil Co. Ltd.	578,186,924	245,220,727	731,996,868	51,240,524

13. Investment Property

Investment property as at December 31, 2018 and 2017, are as follows:

(in thousands of Korean won)

	December 31, 2018	December 31, 2017
Land	10,634,973	10,634,973

During the period, rental income from investment property is ₩ 12 million (2017: ₩ 12 million), and direct operating expenses (including repairs and maintenance) arising from investment property that generated rental income during the period are ₩ 45 million (2017: ₩ 42 million). Fair value of investment property as at December 31, 2018, is ₩ 11,740 million (2017: ₩ 11,740 million). The valuation of fair value is performed by an independent valuer.

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14. Property, Plant and Equipment

Changes in property, plant and equipment for the periods ended December 31, 2018 and 2017, are as follows:

(1) 2018

(in thousands of Korean won)

	Land	Buildings	Structures	Machinery and equipment	Vessels	Vehicles	Tools	Construction -in-progress	Others	Total
Opening acquisition cost	1,180,961,933	326,639,097	1,598,669,960	4,195,882,095	43,727,999	13,786,226	174,306,027	555,281,432	337,145,652	8,426,400,421
Opening accumulated depreciation	-	(77,070,109)	(500,950,907)	(1,275,517,007)	(6,621,183)	(11,958,375)	(121,126,738)	-	(233,999,636)	(2,227,243,955)
Opening net book amount	1,180,961,933	249,568,988	1,097,719,053	2,920,365,088	37,106,816	1,827,851	53,179,289	555,281,432	103,146,016	6,199,156,466
Acquisitions	2,658,297	287,950	2,788,640	1,308,436	-	36,190	10,333,979	807,913,037	-	825,326,529
Disposals	(5,205,443)	(990,710)	(212,278)	(1,744,735)	-	(26)	(122,040)	-	(6)	(8,275,238)
Transfer	55,839,492	36,563,975	87,886,180	797,306,942	-	503,369	3,713,003	(1,088,500,162)	97,398,940	(9,288,261)
Depreciation charge	-	(8,627,176)	(41,664,945)	(225,011,285)	(2,245,492)	(679,771)	(18,359,842)	-	(33,932,994)	(330,521,505)
Exchange differences	-	-	-	-	1,581,079	-	209	-	-	1,581,288
Closing acquisition cost	1,234,254,279	361,882,545	1,688,542,549	4,982,759,088	45,634,007	13,889,418	184,254,916	274,694,307	425,912,660	9,211,823,769
Closing accumulated depreciation	-	(85,079,518)	(542,025,899)	(1,490,534,642)	(9,191,604)	(12,201,805)	(135,510,318)	-	(259,300,704)	(2,533,844,490)
Closing net book amount	1,234,254,279	276,803,027	1,146,516,650	3,492,224,446	36,442,403	1,687,613	48,744,598	274,694,307	166,611,956	6,677,979,279

(2) 2017

(in thousands of Korean won)

	Land	Buildings	Structures	Machinery and equipment	Vessels	Vehicles	Tools	Construction -in-progress	Others	Total
Opening acquisition cost	1,185,267,095	320,915,623	1,566,263,907	3,934,792,736	49,292,506	13,186,991	163,687,589	246,465,060	272,021,174	7,751,892,681
Opening accumulated depreciation	-	(69,888,661)	(458,847,574)	(1,086,002,461)	(5,002,144)	(11,550,874)	(107,854,248)	-	(191,807,852)	(1,930,953,814)
Opening net book amount	1,185,267,095	251,026,962	1,107,416,333	2,848,790,275	44,290,362	1,636,117	55,833,341	246,465,060	80,213,322	5,820,938,867
Acquisitions	502,812	541,733	290,721	2,103,581	29,079	237,565	8,139,496	708,428,029	-	720,273,016
Disposals	(5,255,613)	(941,219)	(855,642)	(9,287,085)	-	(19)	(204,658)	-	-	(16,544,236)
Transfer	447,639	6,894,383	33,661,051	279,501,425	-	531,399	7,103,164	(399,611,657)	65,216,073	(6,256,523)
Depreciation charge	-	(7,952,871)	(42,793,409)	(200,743,108)	(2,307,819)	(577,211)	(17,689,594)	-	(42,283,380)	(314,347,392)
Exchange differences	-	-	-	-	(4,904,806)	-	(2,460)	-	-	(4,907,266)
Closing acquisition cost	1,180,961,933	326,639,097	1,598,669,960	4,195,882,095	43,727,999	13,786,226	174,306,027	555,281,432	337,145,652	8,426,400,421
Closing accumulated depreciation	-	(77,070,109)	(500,950,907)	(1,275,517,007)	(6,621,183)	(11,958,375)	(121,126,738)	-	(233,999,636)	(2,227,243,955)
Closing net book amount	1,180,961,933	249,568,988	1,097,719,053	2,920,365,088	37,106,816	1,827,851	53,179,289	555,281,432	103,146,016	6,199,156,466

Line items including depreciation in the statements of income for the periods ended December 31, 2018 and 2017, are as follows:

(in thousands of Korean won)

	2018	2017
Cost of sales	311,792,473	295,864,141
Selling and administrative expenses	18,729,032	18,483,251
	330,521,505	**314,347,392**

During the period, the Group has capitalized borrowing costs amounting to ₩ 8,455 million (2017: ₩ 6,502 million) on property, plant and equipment that are qualifying assets. The capitalization rate of borrowings used to determine the amount of borrowing costs to be capitalized is 2.59% (2017: 3.01%).

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December 31, 2018 and 2017

Details of property, plant and equipment provided as collaterals as at December 31, 2018, are as follows:

(1) December 31, 2018

(in thousands of Korean won, thousands of USD)

	Book amount	Secured amount	Related line item	Related amount	Secured party
Land / Building	86,317,550	858,000,000	Borrowings (Note 17)	715,000,000	Korea Development bank and other financial institutions
Machinery	848,480,899				
Construction-in-progress	76,811,063				
Construction-in-progress	214,042,603	144,000,000		119,700,000	Korea Development bank and other financial institutions
Vessel	22,969,552	USD 14,957		USD 14,957	HIHD Co., Ltd.

The following table analyzes the book amount of land measured under revaluation model and cost model as at December 31, 2018.

(in thousands of Korean won)

	Revaluation model	Cost model
Land	1,234,254,279	934,862,065

Operating lease

The lease payments recognized as expenses for the periods ended December 31, 2018 and 2017, are as follows:

(in thousands of Korean won)

	2018	2017
Total lease payments	21,138,254	22,653,418

Total minimum lease payments in relation to non-cancellable operating leases that are payable at the end of the reporting period are as follows:

(in thousands of Korean won)

	2018	2017
Within one year	13,738,191	18,930,374
Later than one year but not later than two years	5,246,739	8,284,080
Later than two years	7,814,037	5,398,922
	26,798,967	**32,613,376**

15. Intangible Assets

Changes in intangible assets for the periods ended December 31, 2018 and 2017, are as follows:

(1) 2018

(in thousands of Korean won)

	Goodwill	Development costs	Membership rights	Others	Total
Book amount at January 1, 2018	56,629,475	10,159,985	13,184,586	16,405,310	**96,379,356**
Additions	-	7,000	13,338	-	**20,338**
Disposals	-	-	-	(1)	**(1)**
Amortization	-	(3,385,384)	-	(2,047,352)	**(5,432,736)**
Transfer	-	2,612,411	-	2,099,012	**4,711,423**
Exchange differences	-	-	11,559	(1)	**11,558**
Book amount at December 31, 2018	56,629,475	9,394,012	13,209,483	16,456,968	**95,689,938**

(2) 2017

(in thousands of Korean won)

	Goodwill	Development costs	Membership rights	Others	Total
Book amount at January 1, 2017	56,629,475	9,377,056	13,108,566	15,996,781	**95,111,878**
Additions	-	-	32,116	11,314	**43,430**
Disposals	-	-	(620,139)	-	**(620,139)**
Amortization	-	(2,718,078)	-	(1,576,545)	**(4,294,623)**
Transfer	-	3,501,007	696,421	1,974,073	**6,171,501**
Exchange differences	-	-	(32,378)	(313)	**(32,691)**
Book amount at December 31, 2017	56,629,475	10,159,985	13,184,586	16,405,310	**96,379,356**

Line items including amortization in the statements of income for the periods ended December 31, 2018 and 2017, are as follows:

(in thousands of Korean won)

	2018	2017
Cost of sales	1,306,691	806,924
Selling and administrative expenses	4,126,045	3,487,699
	5,432,736	**4,294,623**

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December 31, 2018 and 2017

Impairment of Intangible Assets

The Group's goodwill as at December 31, 2018 and 2017, represents the goodwill arising from past acquisition. Goodwill is distributed based on the cash-generating units, by which the executives manage the goodwill.

(in thousands of Korean won)

	Goodwill allocation amount	
	December 31, 2018	**December 31, 2017**
Goodwill	56,629,475	56,629,475

Assumptions	Rate	
	2018	**2017**
Operating profit margin compared to sales volume	5.87%	6.77%
Growth rate of the sales volume(*1)	(-)0.19%	0.64%
Growth rate beyond 5 years(*2)	0.93%	0.71%
Pre-tax discount rate(*3)	5.81%	7.56%

(*1) Weighted average of sales growth rate calculated based on historical growth rate to forecast cash flows for five years.
(*2) Consistent with the growth rate beyond five years used in the Industrial Report.
(*3) Pre-tax discount rate applied in forecasted cash flows.

Additionally, no issue of impairment regarding goodwill has been identified through impairment test.

16. Trade and Other Payables

Trade and other payables as at December 31, 2018 and 2017, are as follows:

(in thousands of Korean won)

	December 31, 2018	**December 31, 2017**
Current		
Trade payables	1,741,274,927	1,746,989,568
Other payables	992,028,166	710,488,055
Accrued expenses	24,887,931	27,818,711
	2,758,191,024	**2,485,296,334**
Non-current		
Long-term withholdings	8,444,579	7,963,539
	8,444,579	**7,963,539**

17. Short and Long-term Financial Liabilities

Details of short-term financial liabilities as at December 31, 2018 and 2017, are as follows:

(in thousands of Korean won)

	December 31, 2018	**December 31, 2017**
Short-term borrowings	1,201,667,546	693,477,044
Current portion of long-term borrowings	62,151,587	2,047,796
Current portion of bonds	309,837,710	319,906,467
	1,573,656,843	**1,015,431,307**

Details of long-term financial liabilities as at December 31, 2018 and 2017, are as follows:

(in thousands of Korean won)

	December 31, 2018	**December 31, 2017**
Long-term borrowings	838,635,738	882,199,459
Bonds	1,017,490,788	977,817,565
	1,856,126,526	**1,860,017,024**

Details of short-term borrowings as at December 31, 2018 and 2017, are as follows:

(in thousands of Korean won)

Type of borrowings	Creditor	Interest (%)	December 31, 2018	December 31, 2017
Commercial paper	KB Securities Co., Ltd. and others	2.25%~2.31%	360,000,000	40,000,000
Invoice Loan	Korea Development Bank and others	2.75%~3.27%	697,229,330	474,693,333
Usance L/C	Korea Development Bank and others	2.65%~3.09%	105,166,716	174,783,711
Import Loan	Bank of China	2.96%	16,771,500	-
General loan	Shinhan Bank and others	3.37%~3.84%	22,500,000	4,000,000
			1,201,667,546	**693,477,044**

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December 31, 2018 and 2017

Details of long-term borrowings as at December 31, 2018 and 2017, are as follows:

(in thousands of Korean won)

Type of borrowings	Creditor	Interest (%)	December 31, 2018	December 31, 2017
Commercial paper	Shinhan Bank	2.20%	60,000,000	60,000,000
Energy invest loan	Korea Development Bank	1.75%	575,600	1,151,200
Facility loan	Korea Development Bank and others	3.72%	705,607,531	704,249,584
Facility loan	Korea Development Bank and others	3.63%	117,881,015	101,349,578
Shipbuilding loan	HIHD Co., Ltd.	4.40%	16,723,179	17,496,893
			900,787,325	**884,247,255**
Less: Current maturities			**(62,151,587)**	**(2,047,796)**
			838,635,738	**882,199,459**

Details of bonds as at December 31, 2018 and 2017, are as follows:

(in thousands of Korean won)

Series	Issuance date	Maturity date	Interest (%)	December 31, 2018	December 31, 2017
111-2nd	2012-10-23	2019-10-23	3.52%	99,956,515	99,904,333
112-1st	2014-01-27	2018-01-27	3.35%	-	149,985,567
112-2nd	2014-01-27	2019-01-27	3.59%	49,995,815	49,945,596
113th	2014-06-25	2018-06-25	3.01%	-	99,948,950
114-2nd	2014-11-21	2019-11-21	2.59%	159,885,380	159,760,340
114-3rd	2014-11-21	2021-11-21	2.94%	59,893,708	59,857,265
115-1st	2015-03-27	2018-03-27	1.98%	-	69,971,950
115-2nd	2015-03-27	2020-03-27	2.20%	189,804,335	189,647,804
115-3rd	2015-03-27	2022-03-27	2.53%	139,733,019	139,650,871
116-1st	2017-07-07	2022-07-07	2.58%	179,550,530	179,407,815
116-2nd	2017-07-07	2024-07-07	2.85%	99,705,589	99,643,541
117th	2018-01-26	2023-01-26	2.89%	149,522,642	-
118-1st	2018-08-28	2021-08-28	2.21%	69,745,227	-
118-2nd	2018-08-28	2023-08-28	2.44%	89,688,995	-
118-3rd	2018-08-28	2025-08-28	2.63%	39,846,743	-
				1,327,328,498	**1,297,724,032**
Less: Current maturities				**(309,837,710)**	**(319,906,467)**
				1,017,490,788	**977,817,565**

18. Net Defined Benefit Liability

Details of net defined benefit liabilities recognized in the statements of financial position as at December 31, 2018 and 2017, are as follows:

(in thousands of Korean won)

	December 31, 2018	December 31, 2017
Present value of funded defined benefit obligations	216,798,107	195,765,320
Fair value of plan assets	(226,043,108)	(223,705,551)
Contribution to National Pension Fund	(314,594)	(330,154)
Net defined benefit liabilities in the statement of financial position(*1)	(9,559,595)	(28,270,385)

(*1) The excess portion of fair value of plan asset over present value of funded defined benefit obligations is recorded as other non-current assets.

Movements in the defined benefit obligations for the periods ended December 31, 2018 and 2017, are as follows:

(in thousands of Korean won)

	2018	2017
Beginning balance	195,765,320	189,007,747
Current service cost	23,194,519	26,844,901
Interest expense	5,854,998	5,266,098
Remeasurements:	2,286,541	(14,057,312)
Actuarial loss from change in demographic assumptions	-	-
Actuarial loss(gain) from change in financial assumptions	9,192,551	(10,752,743)
Actuarial gain from experience adjustments	(6,906,010)	(3,304,569)
Benefits payments	(12,227,719)	(11,863,940)
Effect of transference	1,924,448	567,826
Ending balance	216,798,107	195,765,320

Movements in the fair value of plan assets for the periods ended December 31, 2018 and 2017, are as follows:

(in thousands of Korean won)

	2018	2017
Beginning balance	223,705,551	202,395,666
Expected return on plan assets	6,638,933	5,389,700
Remeasurements:		
Return on plan assets (excluding amounts included in interest income)	(3,426,837)	(2,646,589)
Contributions:		
Employers	9,191,255	29,955,632
Payments from plans:		
Benefit payments	(10,065,794)	(11,388,858)
Ending balance	226,043,108	223,705,551

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December 31, 2018 and 2017

Plan assets as at December 31, 2018 and 2017, consist of as follows:

At the end of the reporting period, plan assets are invested in principal-guaranteed products.

Expected contributions to post-employment benefit plans for the financial year following the reporting period are ₩ 23,766 million.

The significant actuarial assumptions as at December 31, 2018 and 2017, are as follows:

(in percentage, %)

	2018	2017
Discount rate	2.66% ~ 2.84%	3.19%
Salary growth rate	1.87% ~ 3.46%	1.86% ~ 3.74%

The sensitivity of the defined benefit obligations to changes in the principal assumptions is as follows:

(in percentage, %)

	Effect on defined benefit obligations		
	Changes in principal assumption	Increase in principal assumption	Decrease in principal assumption
Discount rate	1%	9.87% decrease	11.66% increase
Salary growth rate	1%	11.47% increase	9.91% decrease

The weighted average maturity of the defined benefit obligations at the end of the reporting period is 11.72 years.

Expected maturity analysis of undiscounted pension benefits as at December 31, 2018, is as follows:

(in thousands of Korean won)

	Less than 1 year	Between 1 and 2 years	Between 2 and 5 years	Over 5 years	Total
Pension benefits	9,014,327	17,342,694	34,655,829	754,560,551	**815,573,401**

19. Provisions, Contingent Liabilities and Commitments

19.1 Provisions

Changes in provisions for the periods ended December 31, 2018 and 2017, are as follows:

(1) 2018

(in thousands of Korean won)

	Beginning balance	Provision	Reversal	Use	Ending balance
Provision for environmental restoration costs	6,596,800	1,165,097	(2,721,300)	(1,222,855)	3,817,742
Other provision	-	95,038,500	-	-	95,038,500
	6,596,800	96,203,597	(2,721,300)	(1,222,855)	98,856,242

As of December 31, 2018, the amount of ₩ 2,417 million recognized as long-term provisions constitutes a provision for environmental restoration costs.

(2) 2017

(in thousands of Korean won)

	Beginning balance	Increase	Decrease	Ending balance
Provision for environmental restoration costs	6,529,598	2,998,299	(2,931,097)	6,596,800
Provision for carbon gas emission	5,331,117	-	(5,331,117)	-
	11,860,715	2,998,299	(8,262,214)	6,596,800

As of December 31, 2017, the amount of ₩ 4,062 million recognized as long-term provisions constitutes a provision for environmental restoration costs.

In regards to Carbon gas emissions, the Group sets provision for expected expenses due to emissions exceeding the emission rights capacity in a given year. As at December 31, 2018, emission rights for allocation of no cost are as follows:

(in thousands of Korean won)

	2018	2019	2020	Total
Emission allowances allocated free of charge	3,447	3,447	3,447	**10,341**

The carrying amount of emission right is nil and none of rights are pledged as collateral.

Notes to the Consolidated Financial Statements

December 31, 2018 and 2017

19.2 Contingent Liabilities

(in billions of Korean won)

	Description	Amount	Outcome and expectation
Lawsuit as the defendant	Damage claim suit (The Fair Trade Commission)	12.4	-Pending at Seoul Central District Court -Unable to expect the outcome
	Damage claim suit (THE HANKOOK SHELL OIL CO.,LTD.)	14.2	-Pending at Seoul High Court -Partially in favor of the company at Seoul Central District Court

In addition, the Group received a grand jury subpoena from the U.S. Department of Justice in 2018 in regards to alleged collusion in supplying fuel to the U.S. Army bases in Korea between 2005 and 2016. The Group submitted the information requested to the U.S. Department of Justice.

19.3 Commitments

As at December 31, 2018, the Group has entered into bank overdraft agreements with KEB Hana Bank and others for up to ₩30,000 million (2017: ₩30,000 million) and agreement for a discount note for the amount of ₩40,000 million (2017: ₩40,000 million) and medium and long-term agreement for a discount note for the amount of ₩60,000 million (2017: ₩40,000 million) with Shinhan Bank and the exercised amounts are ₩60,000 million. Also, the Group has entered into mutual support agreements with Woori Bank for cooperation partner amounting to ₩30,000 million (2017: ₩30,000 million) and general loan agreement amounting to ₩30,000 million (2017: ₩30,000 million) as at December 31, 2018.

The Group has entered a corporate purchase price and an import letter of credit arrangement of ₩325,000 million and US$ 4,137 million (2017: ₩355,000 million and US$3,920 million) with Korea Development Bank and others. Payment of US$1,457 million has been made as at December 31, 2018, to the beneficiary.

The Group has entered into a factoring agreement with ING Bank for up to ₩140,000 million (2017: ₩0), with DBS Bank for up to ₩130,000 million (2017: ₩110,000 million), with KEB Hana Bank for up to ₩80,000 million (2017: ₩0) and US$80 million, with ANZ Bank and others for up to US$210 million, and ₩277,000 million and US$244 million has been paid at December 31, 2018(Note 10).

As at December 31, 2018, the Group has entered into a cash deficiency support agreement on borrowings with Lotte Chemical Corp., and OCI Co. Ltd for up to ₩286,000 million and ₩120,000 million respectively.

The Group has entered into a share option agreement with Shell Petroleum Company Limited (“Shell”), a joint venture partner of Hyundai and Shell Base Oil Co., Ltd. (“HSB”).
According to the agreement, Shell holds a put option to sell 40% stake to the Company as the evaluation value of the external valuation institution(From August 2014 to August 2021: if the supply of raw materials from the Company to HSB is below a certain level, after August 2021: no condition).
In addition, the Company has a call option to acquire 40% stake from Shell as the evaluation value of the external valuation institution (From August 2021 to August 2029: if the amount of products Shell purchased from HSB is below a certain level, after August 2029: no condition).

20. Derivative Financial Instruments

Details of derivative financial instruments as at December 31, 2018, are as follows:

(in thousands of USD)

Purpose	Type of contract	Details of contract	Contract unit	Contract value	
				Sell	Buy
Cash flow hedge	Commodity forward contracts	Refining margin risk hedge	USD	22,873	21,443
		Product price risk hedge	USD	324,170	324,151
Trading purposes hedge	Commodity forward contracts	Product price risk hedge	USD	3,660	7,988

Derivative financial instruments as at December 31, 2018 and 2017, are as follows:

(1) December 31, 2018

(in thousands of Korean won)

	Type of contract	Financial assets at fair value through profit or loss	Financial liabilities at fair value through profit or loss	Derivative financial assets	Derivative financial liabilities
Cash flow hedge	Commodity forward contracts	-	-	13,082,543	4,238,136
Trading purposes hedge	Commodity forward contracts	210,024	23,911	-	-

(2) December 31, 2017

(in thousands of Korean won)

	Type of contract	Financial assets at fair value through profit or loss	Financial liabilities at fair value through profit or loss	Derivative financial assets	Derivative financial liabilities
Cash flow hedge	Commodity forward contracts	-	-	43,847,366	52,125,144

Expected transactions with high possibility of occurrence of hedged items, regarding cash flow hedge, are estimated to occur within varying periods of 12 month, and will further effect gain or loss in 12 month to come. No expected transaction, under hedge accounting that requires amendment due to less likelihood of occurrence, exists in above financial statements. The effective portion of changes in fair value of derivatives that are recognized as other comprehensive income, as at 2018, amounts to ₩7,732 million (2017: ₩(-)5,714 million), and the associated gains or losses that are reclassified from equity to profit or loss, as at 2018, amounts to ₩2,769 million (2017: ₩(-)2,217 million).

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For the periods ended December 31, 2018 and 2017, realized and unrealized gain (loss) from derivative instruments transactions are as follows:

(3) 2018

(in thousands of Korean won)

	Type of contract	Disposal of financial instruments at fair value through profit or loss		Valuation of financial instruments at fair value through profit or loss	
		Gain	Loss	Gain	Loss
Trading purposes	Foreign exchange forward contracts	4,233,460	7,748,920	-	-
	Commodity forward contracts	-	1,227,911	210,024	23,911
		4,233,460	**8,976,831**	**210,024**	**23,911**

(4) 2017

(in thousands of Korean won)

	Type of contract	Disposal of financial instruments at fair value through profit or loss		Valuation of financial instruments at fair value through profit or loss	
		Gain	Loss	Gain	Loss
Trading purposes	Foreign exchange forward contracts	5,453,088	2,364,521	-	-
	Commodity forward contracts	819,704	280,558	-	-
		6,272,792	**2,645,079**	**-**	**-**

21. Equity

The Company's number of authorized shares is 500,000,000 shares. Total number of ordinary shares issued is 245,082,422 shares, and the par value per share is ₩5,000.

22. Hybrid Equity Securities

Details of bond-type hybrid equity securities classified as equity as at December 31, 2018 and 2017, are as follows:

(in thousands of Korean won)

	Issue date	Maturity date	Interest rate	December 31, 2018	December 31, 2017
1-1st Private hybrid equity securities	2015-12-11	2045-12-11	4.80%	160,000,000	160,000,000
1-2nd Private hybrid equity securities	2015-12-11	2045-12-11	4.75%	65,000,000	65,000,000
				225,000,000	**225,000,000**
Less: issuance expenses				**(727,150)**	**(727,150)**
				224,272,850	**224,272,850**

The condition of hybrid equity securities issued for the period ended December 31, 2018 is as follows:

(in thousands of Korean won)

	1-1st Private hybrid equity securities	1-2nd Private hybrid equity securities
Issue amount	160,000,000	65,000,000
Maturity	30 years (At maturity, it can be extended on the Company's decision)	
Rate	From issue date to December 11, 2020 : Fixed rate 4.80% per year Recalculated and applied every 5 years, Yield rate of government bond with 5 year maturity+ annual 2.865% + annual 2.00% (step-up clauses)	From issue date to December 11, 2020: Fixed rate 4.75% per year, Recalculated and applied every 5 years Yield rate of government bond with 5 year maturity + annual 2.815% + annual 2.00% (step-up clauses)
Condition for interest paid	Three months deferred payment and it is possible to selectively extend the payment date.	
Others	Prepayment is allowed after 5 years from the issuance date or every interest payment date depending on the Company's decision.	

The Group has a right to extend the maturity date of hybrid equity securities. In addition, payment of interest on bonds can be postponed at the discretion of The Group which in that case The Group cannot resolve and pay the dividend of common stocks until the interest is fully paid. Hybrid equity securities where The Group has an unconditional right to avoid delivering cash or another financial asset to settle a contractual obligation are classified as equity instruments.

23. Accumulated Other Comprehensive Income (Loss)

Accumulated other comprehensive income (loss) as at December 31, 2018 and 2017, are as follows:

(in thousands of Korean won)

	December 31, 2018	December 31, 2017
Gain on revaluation of land	218,796,187	220,244,975
Exchange differences	(264,791)	(1,952,094)
Share of other comprehensive income of associate	2,351,303	2,249,587
Derivative instruments for cash flow hedge	7,732,385	(5,714,321)
	228,615,084	**214,828,147**

Notes to the Consolidated Financial Statements

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24. Retained Earnings

Retained earnings as at December 31, 2018 and 2017, consist of:

(in thousands of Korean won)

	December 31, 2018	December 31, 2017
Legal reserves[*1]	119,820,366	85,508,827
Unappropriated retained earnings	2,990,046,791	2,978,719,125
	3,109,867,157	**3,064,227,952**

[*1] The Commercial Code of the Republic of Korea requires the Group to appropriate for each financial period, as a legal reserve, an amount equal to a minimum of 10% of cash dividends paid until such reserve equals 50% of its issued share capital. The reserve is not available for cash dividends payment, but may be transferred to share capital or used to reduce accumulated deficit. When the accumulated legal reserves (the sum of capital reserves and earned profit reserves) are greater than 1.5 times the paid-in capital amount, the excess legal reserves may be distributed.

25. Selling and Administrative Expenses

Selling and administrative expenses for the periods ended December 31, 2018 and 2017, are as follows:

(in thousands of Korean won)

	2018	2017
Salaries	94,811,343	93,677,783
Employee benefit	16,828,372	16,036,949
Promotional expenses	13,323,566	10,821,453
Advertising expenses	22,677,822	19,376,142
Service costs	51,739,244	51,994,340
Commission expenses	27,963,630	22,030,745
Freight expenses	104,406,757	128,369,307
Depreciation	18,729,032	18,483,251
Amortization	4,126,045	3,487,699
Rental expenses	26,792,807	27,171,422
Others	29,684,566	27,300,835
	411,083,184	**418,749,926**

26. Expenses by Nature

Expenses by nature for the periods ended December 31, 2018 and 2017, are as follows:

(in thousands of Korean won)

	2018	2017
Changes in inventories	(621,255,176)	(826,204,340)
Purchase of inventories	20,097,438,366	14,768,852,311
Depreciation	330,521,505	314,347,392
Amortization	5,432,736	4,294,623
Salaries	282,215,489	266,632,735
Others	748,253,851	721,551,685
	20,842,606,771	**15,249,474,406**

The sum of total expenses by nature equals to the sum of cost of sales and selling and administrative expenses in the statement of comprehensive income.

27. Finance Income and Costs

Finance income and costs for the periods ended December 31, 2018 and 2017, are as follows:

(in thousands of Korean won)

	2018	2017
Finance income		
Interest income	4,324,936	4,957,019
Gain on foreign currency translation	5,868,644	17,161,101
Gain on foreign currency transactions	37,613,554	85,384,508
	47,807,134	**107,502,628**
Finance costs		
Interest expense	92,235,636	76,658,996
Loss on sales of trade receivables	6,330,360	537,430
Loss on foreign currency translation	391,725	1,196
Loss on foreign currency transactions	76,549,244	15,296,023
	175,506,965	**92,493,645**

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28. Other Non-operating Income and Expenses

Other non-operating income and expenses of the Group for the periods ended December 31, 2018 and 2017, are as follows:

(in thousands of Korean won)

	2018	2017
Other non-operating income		
Gain on disposal of financial assets at fair value through profit or loss	4,233,460	6,272,792
Gain on valuation of financial assets at fair value through profit or loss	210,024	-
Gain on foreign currency translation	7,095,295	21,419,486
Gain on foreign currency transactions	188,065,328	142,407,616
Gain on disposal of property, plant, and equipment	1,038,926	367,049
Miscellaneous income	45,894,587	15,952,751
	246,537,620	**186,419,694**
Other non-operating expenses		
Loss on disposal of financial assets at fair value through profit or loss	8,976,831	2,645,079
Loss on valuation of financial assets at fair value through profit or loss	23,911	-
Loss on foreign currency translation	4,750,914	16,837,006
Loss on foreign currency transactions	207,067,879	165,908,420
Loss on disposal of property, plant, and equipment	2,608,287	10,734,156
Loss on disposal of intangible assets	1	265,593
Donations	7,463,782	3,854,843
Miscellaneous expenses	104,457,814	5,128,499
	335,349,419	**205,373,596**

29. Income Tax Expense

Income tax expense for the periods ended December 31, 2018 and 2017, are as follows:

(in thousands of Korean won)

	2018	2017
Current tax	172,571,787	276,467,051
Deferred tax due to temporary differences	(38,630,789)	24,779,236
Deferred tax due to tax credit	-	-
Deferred tax charged to equity	(274,436)	(6,241,030)
Income tax expense	133,666,562	295,005,257

The tax on the Group's profit before tax differs from the theoretical amount that would arise using the weighted average tax rate applicable to profits of the Group as follows:

(in thousands of Korean won)

	2018	2017
Profit before income tax expense	537,473,923	1,232,954,451
Tax calculated at domestic tax rates applicable to profits in the respective countries	123,306,246	295,651,323
Effect of income not subject to tax	(15,258,830)	(8,408,116)
Effect of expenses not deductible for tax purposes	28,911,543	1,554,855
Effect of tax exemptions	(3,224,411)	(853,752)
Impact of changes in Korean tax rate	-	11,665,278
Income tax refunds	-	(4,378,470)
Others	(67,986)	(225,861)
	133,666,562	**295,005,257**
Effective tax rate	24.87%	23.93%

Changes in deferred tax assets and liabilities for the peirods ended December 31, 2018 and 2017, are as follows:

(1) 2018

(in thousands of Korean won)

Type	Temporary differences			Deferred tax assets (liabilities)
	Beginning balance	Changes	Ending balance	
Depreciation	85,858,917	6,660,273	92,519,190	25,483,233
Construction-in-progress	30,203,111	(1,154,715)	29,048,396	7,988,309
Contingent liabilities	500,000	-	500,000	137,500
Impairment loss	8,480,066	(365,911)	8,114,155	2,231,393
Accrued income	(171,074)	(36,984)	(208,058)	(57,062)
Provisions	35,890,434	(1,623,708)	34,266,726	9,423,350
Loss on valuation of Inventories	7,395,041	122,731,324	130,126,365	35,784,750
Loss(gain) on disposal of property, plant, and equipment	1,218,725	(81,517)	1,137,208	312,732
Post-employment benefit obligations	185,358,855	21,733,825	207,092,680	56,490,070
Plan assets	(207,824,411)	(3,074,575)	(210,898,986)	(57,501,446)
Loss(gain) on valuation of derivative instruments	6,789,603	(9,592,484)	(2,802,881)	(729,921)
Promotion expense	842,977	2,403,550	3,246,527	892,795
Revaluation of assets	(667,418,294)	8,730,031	(658,688,263)	(180,086,221)
Advanced depreciation provision	(91,858,101)	-	(91,858,101)	(25,260,978)
Accrued expenses	6,957,008	1,573,350	8,530,358	2,214,157
Other payables	19,083,198	10,589,925	29,673,123	8,160,109
Government subsidy	1,274,433	(1,030,791)	243,642	67,001
Others	142,752,049	51,773,562	194,525,611	(20,198,617)
	(434,667,463)	**209,235,155**	**(225,432,308)**	**(134,648,846)**

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(2) 2017

(in thousands of Korean won)

Type	Temporary differences			Deferred tax assets (liabilities)
	Beginning balance	Changes	Ending balance	
Depreciation	69,652,608	16,206,309	85,858,917	23,656,841
Construction-in-progress	31,202,759	(999,648)	30,203,111	8,305,856
Contingent liabilities	500,000	-	500,000	137,500
Impairment loss	9,217,177	(737,111)	8,480,066	2,332,018
Accrued income	(206,738)	35,664	(171,074)	(46,869)
Provisions	34,022,980	1,867,454	35,890,434	9,869,869
Loss on valuation of Inventories	3,914,169	3,480,872	7,395,041	2,033,636
Loss(gain) on disposal of property, plant, and equipment	1,301,238	(82,513)	1,218,725	335,149
Post-employment benefit obligations	93,572,842	16,995,387	110,568,229	30,064,867
Plan assets	(180,671,531)	(27,152,880)	(207,824,411)	(56,710,824)
Loss(gain) on valuation of derivative instruments	(452,279)	7,241,882	6,789,603	1,782,099
Promotion expense	683,129	159,848	842,977	231,819
Revaluation of assets	(676,945,492)	9,527,198	(667,418,294)	(182,486,979)
Advanced depreciation provision	(91,858,874)	773	(91,858,101)	(25,260,978)
Actuarial gains and losses	85,224,459	(10,433,833)	74,790,626	21,132,068
Accrued expenses	6,537,643	419,365	6,957,008	1,840,186
Other payables	-	19,083,198	19,083,198	5,247,879
Government subsidy	2,398,933	(1,124,500)	1,274,433	350,469
Provision for carbon gas emission	5,331,117	(5,331,117)	-	-
Others	95,286,406	47,465,643	142,752,049	(16,094,241)
	(511,289,454)	**76,621,991**	**(434,667,463)**	**(173,279,635)**

Details of deferred income tax charged to equity are as follows:

(in thousands of Korean won)

	2018	2017
Cash flow hedges	(736,496)	1,782,099
Gain on revaluation of land	(81,539,173)	(82,246,164)
Actuarial losses	22,669,236	21,132,068
	(59,606,433)	**(59,331,997)**

Details of unrecognized deductible (taxable) temporary differences as deferred tax liabilities as at December 31, 2018 and 2017, are as follows:

(in thousands of Korean won)

	December 31, 2018	December 31, 2017	Remarks
Interests in subsidiary	178,567,779	147,587,377	No plans for disposal

30. Earnings per Share

Basic earnings per ordinary share for the periods ended December 31, 2018 and 2017, is as follows:

(in thousands of Korean won, except per share amount)

	2018	2017
Profit attributable to the ordinary equity holders of the Parent Company	402,009,631	861,802,708
Dividends of hybrid equity securities	(10,767,500)	(10,767,500)
Weighted average number of ordinary shares outstanding(shares)	245,082,422	245,082,422
Basic earnings per share(in Korean won)	1,596	3,472

The Group did not issue any potential ordinary shares. Therefore, basic earnings per share is identical to diluted earnings per share.

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31. Cash Generated from Operations

Cash generated from operations for the periods ended December 31, 2018 and 2017, are as follows:

(in thousands of Korean won)

	2018	2017
Adjustments for:		
Post-employment benefits	22,410,584	26,721,299
Depreciation	330,521,505	314,347,392
Amortization	5,432,736	4,294,623
Impairment loss(reversal)	418,980	(226,897)
Impairment loss(reversal) of other receivables	-	(105,636)
Interest expense	92,235,636	76,658,996
Loss on sales of trade receivables	6,330,360	537,430
Loss on foreign currency translation	5,142,639	16,838,202
Loss on valuation of financial assets at fair value through profit or loss	23,911	-
Loss on disposal of financial assets at fair value through profit or loss	8,976,831	2,645,079
Loss on valuation of inventory (reversal)	138,463,410	3,617,656
Loss on disposal of property, plant, and equipment	2,608,287	10,734,156
Loss on disposal of intangible assets	1	265,593
Income tax expense	133,666,562	295,005,257
Miscellaneous losses	95,059,065	-
Interest income	(4,324,936)	(4,957,019)
Gain on foreign currency translation	(12,963,939)	(38,580,587)
Gain on valuation of financial assets at fair value through profit or loss	(210,024)	-
Gain on disposal of financial assets at fair value through profit or loss	(4,233,460)	(6,272,792)
Gain on disposal of property, plant, and equipment	(1,038,926)	(367,049)
Share of profit of investments accounted for using the equity method	(92,949,192)	(99,066,800)
Provision for restoration costs	1,165,097	498,299
Reversal of provision for restoration costs	(2,721,300)	-
	724,013,827	**602,587,202**

(in thousands of Korean won)

	2018	2017
Changes in operating assets and liabilities		
Trade receivables	505,594,095	(381,696,095)
Other receivables	(144,113,692)	4,185,656
Inventories	(762,938,121)	(840,363,013)
Other current assets	605,811	(2,773,725)
Other non-current assets	(43,735)	54,789
Trade payables	(147,203,490)	927,958,387
Other payables	358,979,683	(84,804,167)
Other current liabilities	24,609,267	(17,897,157)
Long-term trade and other payables	481,040	525,400
Net defined benefit liability	(9,413,171)	(29,821,063)
Provisions	(1,222,855)	(5,762,214)
Deferred income	1,155,351	1,800,252
Other non-current liabilities	389,864	136,129
	(173,119,953)	**(428,456,821)**

Significant non-cash investing and financing activities for the periods ended December 31, 2018 and 2017, are as follows:

(in thousands of Korean won)

	2018	2017
Transferred from construction-in-progress to other property, plant and equipment and intangible assets accounts	1,088,500,162	399,611,656
Other payables related to the acquisition of property, plant and equipment	57,904,792	(36,268,786)

Changes in liabilities arising from financing activities for the periods ended December 31, 2018 are as follows.

(1) 2018

(in thousands of Korean won)

	Beginning balance	Cash flows from financing activities	Non-cash activities		Ending balance
			Amortization	Foreign currency conversion effect	
Short-term borrowings	693,477,045	513,667,572	-	(5,477,071)	1,201,667,546
Long-term borrowings	884,247,255	14,612,493	1,189,384	738,193	900,787,325
Bonds	1,297,724,032	28,634,720	969,746	-	1,327,328,498
	2,875,448,332	**556,914,785**	**2,159,130**	**(4,738,878)**	**3,429,783,369**

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32. Related Party Transactions

As at December 31, 2018, the Parent company is Hyundai Heavy Industries Holdings Co., Ltd. (formerly Hyundai Robotics Co., Ltd.) (percentage of ownership: 91.13%), a newly established entity through equity spin-off from Hyundai Heavy Industries Co., Ltd. on April 1, 2017. Hyundai Heavy Industries Holdings Co., Ltd. (formerly Hyundai Robotics Co., Ltd.) is also the ultimate parent company of the Company.

Details of associates and other related parties that have sales and other transactions with the Group or have outstanding balances as at December 31, 2018 and 2017, are as follows:

	2018	2017
Joint venture	Hyundai Cosmo Petrochemical Co., Ltd.	Hyundai Cosmo Petrochemical Co., Ltd.
	Hyundai and Shell Base Oil Co., Ltd.	Hyundai and Shell Base Oil Co., Ltd.
Other related parties	Hyundai Construction Equipment Co., Ltd.	Hyundai Construction Equipment Co., Ltd.
	Hyundai Electric & Energy Systems Co., Ltd.	Hyundai Electric & Energy Systems Co., Ltd.
	Hyundai Global Service Co., Ltd.	Hyundai Global Service Co., Ltd.
	Hyundai Heavy Industries Co., Ltd.	Hyundai Heavy Industries Co., Ltd.
	The subsidiaries of Hyundai Heavy Industries Co., Ltd. and others	The subsidiaries of Hyundai Heavy Industries Co., Ltd. and others

Sales and purchases with related parties for the periods ended December 31, 2018 and 2017, are as follows:

(in thousands of Korean won)

		2018			
		Sales	Other Sales	Purchases	Other purchases
Joint venture	Hyundai Cosmo Petrochemical Co., Ltd.	2,136,325,957	27,948,164	1,140,437,718	7,357,372
	Hyundai and Shell Base Oil Co., Ltd.	636,786,543	7,104,983	171,109,378	-
Other related parties	Hyundai Heavy Industries Co., Ltd.	39,384,923	93	-	23,235,959
	Hyundai Construction Equipment Co., Ltd.	8,477,014	-	-	-
	Hyundai Electric & Energy Systems Co., Ltd.	2,273,012	-	-	2,969,436
	Hyundai Mipo Dockyard Co., Ltd.	6,741,564	-	-	-
	Hyundai Samho Heavy Industries Co., Ltd.	20,088,092	-	-	3,265
	HYUNDAI HYMS CO., LTD.	41,735,598	-	-	-
	Hyundai Global Service Co., Ltd.	89,495,175	-	-	-
	Others	10,332,287	-	-	11,170,599
		2,991,640,165	**35,053,240**	**1,311,547,096**	**44,736,631**

(in thousands of Korean won)

		2017	
		Sales and others	Purchases and others
Joint venture	Hyundai Cosmo Petrochemical Co., Ltd.	1,700,426,350	1,025,060,892
	Hyundai and Shell Base Oil Co., Ltd.	565,226,458	154,517,430
Other related parties	Hyundai Heavy Industries Co., Ltd.	50,434,307	7,974,314
	Hyundai Construction Equipment Co., Ltd.(*1)	6,014,266	-
	Hyundai Electric & Energy Systems Co., Ltd.(*1)	1,640,336	7,931,166
	Hyundai Mipo Dockyard Co., Ltd.	6,017,768	-
	Hyundai Samho Heavy Industries Co., Ltd.	11,994,898	3,366
	HYUNDAI HYMS CO., LTD.	85,711,699	-
	Others	6,569,422	10,471,182
		2,434,035,504	**1,205,958,350**

(*1) This company was newly established on April 1, 2017 through equity spin-off from Hyundai Heavy Industries Co., Ltd. The amount includes the transaction amount from its establishment to December 31, 2017.

Outstanding balances arising from sales/purchases of goods and services as at December 31, 2018 and 2017, are as follows:

(1) December 31, 2018

(in thousands of Korean won)

		Receivables		Payables	
		Trade receivables	Other receivables	Trade payables	Other payables
Joint venture	Hyundai Cosmo Petrochemical Co., Ltd.	21,690,633	5,599,491	82,068,280	1,074,865
	Hyundai and Shell Base Oil Co., Ltd.	8,812,789	103,450	18,004,535	41,968
Other related parties	Hyundai Heavy Industries Co., Ltd.	18,326,631	26,894	-	77,959
	Hyundai Construction Equipment Co., Ltd.	3,020,117	-	-	-
	Hyundai Electric & Energy Systems Co., Ltd.	321,136	-	-	-
	Hyundai Mipo Dockyard Co., Ltd.	883,740	-	-	-
	Hyundai Samho Heavy Industries Co., Ltd.	6,697,242	10,319	-	294
	HYUNDAI HYMS CO., LTD.	61,409	-	-	-
	Hyundai Global Service Co., Ltd.	9,073,126	-	-	-
	Others	2,408,476	2,466,667	-	321,860
		71,295,299	**8,206,821**	**100,072,815**	**1,516,946**

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(2) December 31, 2017

(in thousands of Korean won)

		Receivables		Payables	
		Trade receivables	Other receivables	Trade payables	Other payables
Joint venture	Hyundai Cosmo Petrochemical Co., Ltd.	178,612,643	7,011,338	111,192,222	1,016,190
	Hyundai and Shell Base Oil Co., Ltd.	61,488,832	-	15,356,136	-
Other related parties	Hyundai Heavy Industries Co., Ltd.	19,200,897	-	-	442,571
	Hyundai Construction Equipment Co., Ltd.	3,391,457	-	-	-
	Hyundai Electric & Energy Systems Co., Ltd.	544,356	-	-	90,354
	Hyundai Mipo Dockyard Co., Ltd.	329,762	-	-	44,388
	Hyundai Samho Heavy Industries Co., Ltd.	2,308,541	55,049	-	309
	HYUNDAI HYMS CO., LTD.	7,915,243	-	-	-
	Others	450,539	-	-	-
		274,242,270	**7,066,387**	**126,548,358**	**1,593,812**

Fund transactions with related parties for the periods ended December 31, 2018 and 2017, are as follows:

(in thousands of Korean won)

		Dividend	
		2018	2017
Parent Company	Hyundai Heavy Industries Holdings Co., Ltd. (formerly, Hyundai Robotics Co., Ltd.)	(312,664,141)	(267,997,835)
Joint venture	Hyundai and Shell Base Oil Co., Ltd.	18,000,000	30,000,000

On November 27, 2018, Hi Investment & Securities Co., Ltd., was excluded from the business group and excluded from related parties. Before being excluded from related parties, the Group has entrusted Hi Investment & Securities Co., Ltd., an other related party of the Company, with short-term funds to invest in Money Market Trust(MMT) with an average daily balance of ₩ 60,672 million(2017: ₩ 72,933 million). For the periods ended 2018 and 2017, the Company does not have remaining balances in the MMT. The Company had deposited plan assets of ₩ 6,076 million in Hi Investment & Securities Co., Ltd. account as at December 31, 2017.

Details of payment guarantees provided by the Group for the funding sources of the related parties as at December 31, 2018, are as follows. No collateral is provided by the Group, and no collateral and payment guarantees are provided by the related parties:

Guarantee

(in thousands of USD)

		Guaranteed by	Guaranteed amount	Guarantee period	Remark
Joint Venture	Hyundai Cosmo Petrochemical Co., Ltd.(*1)	Mizuho Bank	USD 7,500	2012-10-26 ~ 2019-9-30	Borrowings

(*1) The amount guaranteed is the unpaid balance of the total contracted amount of USD 30 million.

The compensation paid or payable to key management for employee services consists of:

(in thousands of Korean won)

	2018	2017
Short-term salaries	4,199,149	2,590,287
Post-employment benefits	806,989	329,980
	5,006,138	**2,920,267**

Key management includes directors (executive and non-executive) who have the authority and responsibility in planning, operations and control of the Group's operations.

33. Changes in accounting policies

33.1 Application of Korean IFRS 1109 Financial Instruments

As explained in Note 2, the Group adopted Korean IFRS 1109 on January 1, 2018 as the initial date of adoption. The Group has not restated its financial statements of 2017 in accordance with the transition rules. The effect of adoption of Korean IFRS 1109 on the financial statements is as follows.

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33.1.1 Classification and measurement of financial instruments

There is no change in the beginning retained earnings due to the classification and measurement of financial instruments.

Management has evaluated the business model applied to the financial assets held as of January 1, 2018, the initial application date of Korean IFRS 1109, and classified the financial assets in accordance with Korean IFRS 1109. The effect of this reclassification is as follows.

(in thousands of Korean won)

	Loans and receivables	Available-for-sale financial assets	Amortized cost	Fair value through profit or loss	Total of financial assets
Beginning book value - KIFRS 1039	1,969,080,656	3,000,000	-	-	**1,972,080,656**
Reclassification of loans and receivables as amortized cost	(1,969,080,656)	-	1,969,080,656	-	**-**
Reclassification of available-for-sale financial assets as financial assets recognized fair value through profit or loss	-	(3,000,000)	-	3,000,000	**-**
Beginning book value - KIFRS 1109	-	-	1,969,080,656	3,000,000	**1,972,080,656**

(1) Reclassification of available-for-sale financial assets as Financial assets recognized fair value through profit or loss

The Group has elected to classify the equity investment ₩3,000 million, previously classified as available-for-sale, as assets measured at fair value through profit or loss, for which all subsequent changes in fair value are recognized in profit or loss.

(2) Reclassification of financial instruments upon adoption of Korean IFRS 1109

The reclassification of financial assets as a result of adoption of Korean IFRS 1109 as of January 1, 2018, which is the initial application date, is as follows.

(in thousands of Korean won)

	Measurement category		Book value		
	KIFRS 1039	KIFRS 1109	KIFRS 1039	KIFRS 1109	Difference
Current assets					
Cash and cash equivalents	Loans and receivables	Amortization cost	148,231,468	148,231,468	-
Short-term financial assets	Loans and receivables	Amortization cost	10,183,166	10,183,166	-
Derivative assets	Cash flow hedging instruments	Cash flow hedging instruments	43,847,366	43,847,366	-
Trade and other receivables	Loans and receivables	Amortization cost	1,694,497,926	1,694,497,926	-
Non-current assets					
Long-term financial assets	Loans and receivables	Amortization cost	2,024,500	2,024,500	-
Debt instruments (investment funds)	Available-for-sale financial assets	Fair value through profit or loss	3,000,000	3,000,000	-
Trade and other receivables	Loans and receivables	Amortization cost	114,143,596	114,143,596	-
Current liabilities					
Derivative liabilities	Cash flow hedging instruments	Cash flow hedging instruments	52,125,144	52,125,144	-

33.1.2 Impairment of financial assets

The adoption of Korean IFRS 1109 has changed the recognition policy of impairment loss and has no effect on the beginning retained earnings of the Group.

The Group has elected to measure loss allowances for trade receivables and contract assets at an amount equal to lifetime expected credit losses.

33.2 Application of Standard 1115 'Revenue from Contract with Customer'

As described in Note 2, the Group has adopted Korean IFRS 1115 from the beginning of 2018, and the comparative financial statements have not been restated. The adoption of this standard did not have a significant effect on the consolidated financial statements.

34. Restatement of Financial Statements

Due to changes in scope for consolidation, consolidated financial statements of the Group as at and for the periods ended December 31, 2017, were restated as follows.

The Group has established Hyundai and Shell Base Oil Co., Ltd., a joint venture which is engaged in the production and sale of lube base oils with The Shell Petroleum Company Limited (Shell) on April 12, 2012, with the ownership interest of 60% and 40% by the Company and Shell, respectively. Its Board of Directors consists of three persons appointed by the Group and two persons appointed by Shell.

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Hyundai and Shell Base Oil Co., Ltd. purchases 100% of raw materials from the Company, manufactures lube base oils and sells them to the Company, Shell and other customers and all the by-products are also sold to the Company. The entire operation of the plant and part of the general management services of Hyundai and Shell Base Oil Co., Ltd., are provided by the Company.

Based on the ownership interest of 60% from its establishment in 2012, the supply of raw materials and the control over production and operating activities of Hyundai and Shell Base Oil Co., Ltd., the Group had classified Hyundai and Shell Base Oil Co., Ltd. as a subsidiary included it in the consolidation.

However, in the review of the accounting treatments for the Company's initial public offering in 2018, management of the Company has concluded that Hyundai and Shell Base Oil Co., Ltd. should have been accounted for as a joint venture since the joint approval of Shell is significant in its decision making despite 60% ownership of the Company. As a result, the Group classified Hyundai and Shell Base Oil Co., Ltd. as a joint venture and determined to restate financial statements.

(a) Consolidated statements of financial position

(in thousands of Korean won)

	December 31, 2017		
	Before adjustment	**After adjustment**	**Difference**
Current assets	4,306,617,000	4,103,581,443	(203,035,557)
Non-current assets	6,955,428,992	6,837,742,766	(117,686,226)
Total assets	11,262,045,992	10,941,324,209	(320,721,783)
Current liabilities	3,823,736,338	3,797,698,433	(26,037,905)
Non-current liabilities	2,304,976,494	2,081,704,802	(223,271,692)
Total liabilities	6,128,712,832	5,879,403,235	(249,309,597)
Equity attributable to owners of the Parent Company	4,677,247,668	4,730,439,330	53,191,662
Non-controlling interest	456,085,492	331,481,644	(124,603,848)
Total equity	5,133,333,160	5,061,920,974	(71,412,186)
Total liabilities and equity	11,262,045,992	10,941,324,209	(320,721,783)

(b) Consolidated statements of income and consolidated statements of comprehensive income

(in thousands of Korean won)

	2017		
	Before adjustment	**After adjustment**	**Difference**
Revenue	16,376,191,660	16,387,306,976	11,115,316
Operating profit	1,260,549,035	1,137,832,570	(122,716,465)
Profit for the period	978,425,396	937,949,194	(40,476,202)
Other comprehensive income (loss)	(6,570,923)	(6,583,035)	(12,112)
Total comprehensive income	971,854,473	931,366,159	(40,488,314)

(c) Consolidated statements of changes in equity

Consolidated statements of changes in equity was restated in accordance with consolidated statement of financial position and consolidated statements of comprehensive income.

(d) Consolidated statements of cash flows

(in thousands of Korean won)

	2017		
	Before adjustment	**After adjustment**	**Difference**
Cash flows from operating activities	873,862,278	790,226,140	(83,636,138)
Cash flows from investing activities	(737,784,417)	(734,301,745)	3,482,672
Cash flows from financing activities	(225,603,146)	(205,603,146)	20,000,000
Net increase (decrease) in cash and cash equivalents	(89,525,285)	(149,678,751)	(60,153,466)
Cash and cash equivalents at the beginning of the period	300,946,654	300,571,957	(374,697)
Effects of exchange rate changes on cash and cash equivalents	(4,579,004)	(2,661,738)	1,917,266
Cash and cash equivalents at the end of the period	206,842,365	148,231,468	(58,610,897)

(e) Notes

Notes were restated in accordance with consolidated statement of financial position, consolidated statements of income, consolidated statements of comprehensive income, consolidated statements of changes in equity and consolidated statements of cash flows.

35. Events after the reporting period

(1) Saudi Aramco plans to acquire up to 19.9% stake in Hyundai Oilbank Co., Ltd. owned by Hyundai Heavy Industries Holdings Co., Ltd., for a maximum of 1.8 trillion won, according to an agreement between Hyundai Heavy Industries Holdings Co. Ltd. and Saudi Aramco. The agreement on investment promotion will be completed through the share purchase agreement between the two companies and the signing of the share agreement, and the size and amount of the equity sale may be changed through final negotiation.

(2) The Board of Directors of the Group decided to acquire business and non-current assets for the expansion of terminal business as follows,

(in millions of Korean won)

	Business transfer	**Acquisition of non-current assets**
Date of transaction (expected)	February 15, 2019	July 31, 2019
Opponent	PLS Co., Ltd.	GS E&R Corp.
Objects	Tank terminal storage business of PLS Co., Ltd. and related assets, contracts, liabilities, employees, facts and others	Land, buildings, storage tanks and others
Amount	4,400	35,000

(3) The Board of Directors of the Group has decided to conclude a cash deficiency support agreement on additional facility borrowings with OCI Co. Ltd for ₩40 billion.

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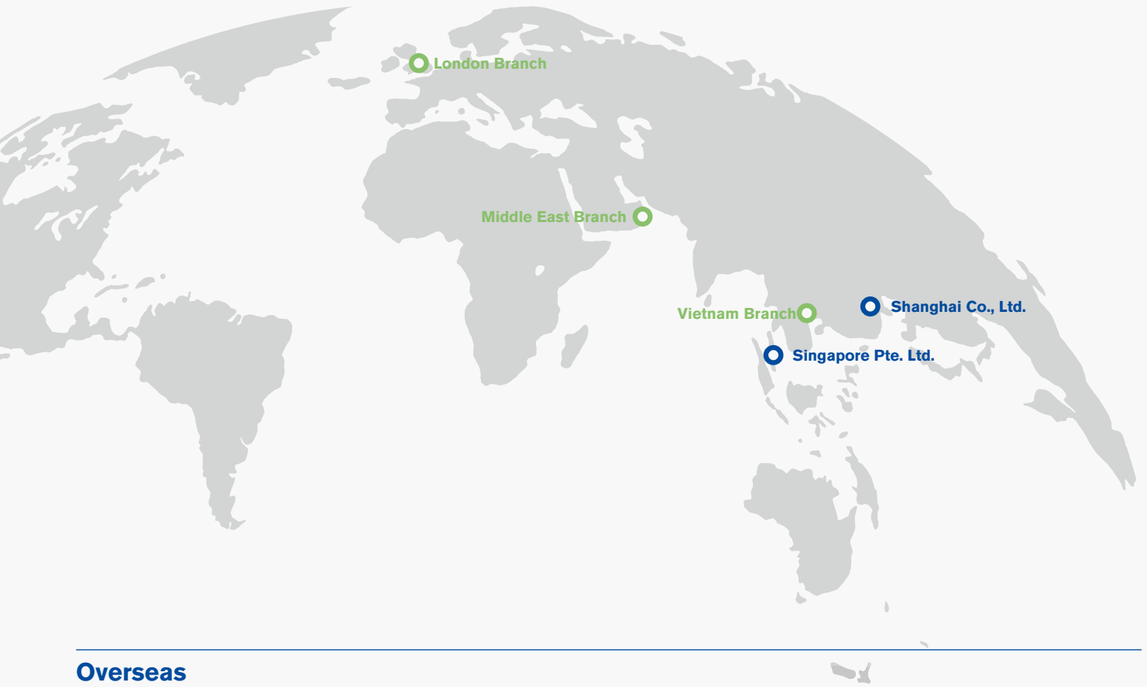

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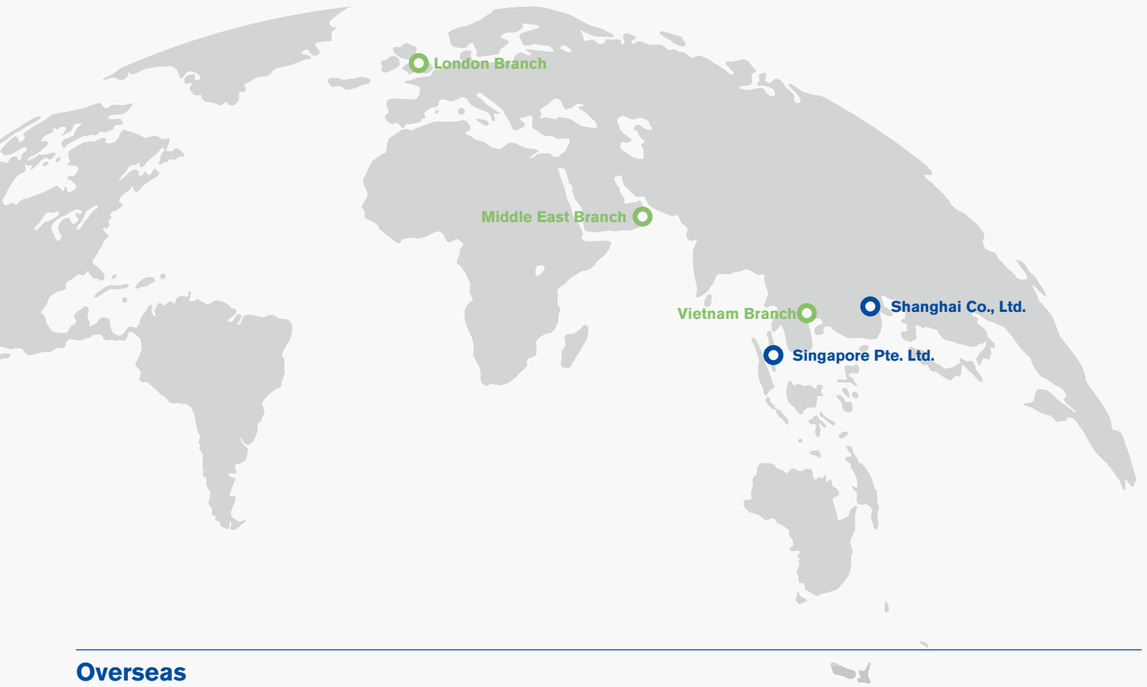

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