Ternium S.A.
Form 6-K
March 19, 2019
FORM 6 - K

SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

Report of Foreign Private Issuer
Pursuant to Rule 13a - 16 or 15d - 16 of
the Securities Exchange Act of 1934

As of 3/19/2019

Ternium S.A.
(Translation of Registrant's name into English)

Ternium S.A.
29 Avenue de la Porte-Neuve – 3rd floor
L-2227 Luxembourg
(352) 2668-3152
(Address of principal executive offices)

Indicate by check mark whether the registrant files or will file annual reports under cover Form 20-F or 40-F.

Form 20-F a Form 40-F __

Indicate by check mark whether the registrant by furnishing the information contained in this Form is also thereby furnishing the information to the Commission pursuant to Rule 12G3-2(b) under the Securities Exchange Act of 1934.

Yes __ No a

If "Yes" is marked, indicate below the file number assigned to the registrant in connection with Rule 12g3-2(b): Not applicable

The attached material is being furnished to the Securities and Exchange Commission pursuant to Rule 13a-16 and Form 6-K under the Securities Exchange Act of 1934, as amended.

This report contains Ternium S.A.'s 2018 Annual Report.

SIGNATURE

Pursuant to the requirements of the Securities Exchange Act of 1934, the Registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

TERNIUM S.A.

By: /s/ Arturo Sporleder
Name: Arturo Sporleder
Title: Secretary to the Board of Directors

Dated: March 19, 2019

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THE COMPANY

TERNIUM is Latin America's leading flat steel producer. We run manufacturing facilities, service center and distribution networks in several countries in the region and the southern United States, serving customers from various industries.

4. Ternium

ABOUT TERNIUM

Ternium is Latin America's leading flat steel producer with an annual crude steel production capacity of 12.4 million tons. We operate in Mexico, Brazil, Argentina, Colombia, the southern United States and Central America through regional manufacturing facilities, service center and distribution networks. In addition, Ternium participates in the control group of Usiminas, a leading flat steel company in the Brazilian market.

Our customers range from small businesses to large global companies in the automotive, home appliances, HVAC (heat, ventilation and air conditioning), construction, capital goods, container, food and energy industries across the Americas. We aim to build close relationships with our customers and recognize that our success is closely linked with theirs.

OUR OPERATIONS

The company's industrial system has varied production technologies that provide a diversified cost structure, based on different types of raw material and energy sources, and a flexible production configuration. The industrial system includes proprietary iron ore mines, steelmaking facilities, finishing facilities, service centers and a broad distribution network to offer slabs, hot-rolled products, cold-rolled products, galvanized and electro-galvanized sheets, pre-painted sheets, tinplate, welded pipes, rebars and wire rods as well as slit and cut-to-length products.

Our broad range of high value added steel products and advanced customer integration systems enable us to

A COMPREHENSIVE MANAGEMENT APPROACH

- Proactive approach to environment, energy, health and safety management
- Focus on differentiation through sophisticated products and services
- Deep ties with our communities
- Commitment to integrity
- Recruitment, training, and retention of talent
- Quest for excellence in industrial management and technology
- Fostering of steel value chain

differentiate from our competitors through the offering of sophisticated products and services. Ternium's innovative culture, industrial expertise and long-term view enable the company to continuously achieve new breakthroughs in industrial excellence, competitiveness and customer service.

We operate with a broad and long-term perspective, and we work towards improving the quality of life of our employees, their families and the local communities where we operate.

Ternium S.A. (the "Company") is a Luxembourg company and its American Depositary Shares, or ADSs, are listed on the New York Stock Exchange (NYSE: TX). We refer to Ternium S.A. and its consolidated subsidiaries as "we," "our" or "Ternium."

The financial and operational information contained in this annual report is based on Ternium's operational data and on the Company's consolidated financial statements, which were prepared in accordance with IFRS and IFRIC interpretations as issued by the IASB and adopted by the European Union and presented in U.S. dollars ($) and metric tons.

Some of the statements contained in this annual report are “forward-looking statements”. Forward-looking statements are based on management’s current views and assumptions and involve known and unknown risks that could cause actual results, performance or events to differ materially from those expressed or implied by those statements. These risks include but are not limited to risks arising from uncertainties as to gross domestic product, related market demand, global production capacity, tariffs, cyclicality in the industries that purchase steel products and other factors beyond Ternium’s control.

Ternium’s results are subject to risks related, among other factors, to changes in steel demand, prices, input costs and financial conditions. For further information see the chapter "Risk Factors" included in this annual report.

5. Annual Report 2018

THE COMPANY

STRONG COMMITMENT TO THE ENVIRONMENT, HEALTH AND SAFETY
We devote significant resources to environment, health and safety (EHS), as we believe they are key to our long-term sustainability. We have standardized environment, health and safety management systems. We also have an energy savings management system in our Brazilian steel mill and we are advancing the implementation of similar systems in other facilities. Our employees are extensively trained in EHS and our management is accountable for their EHS performance. Ternium's health and safety system is certified under OHSAS 18001, our environment system is certified under ISO 14001 and our energy savings system is certified under ISO 50001. We invest in the best available technologies to reduce our environmental footprint and safety risk.

COMMITMENT TO INTEGRITY THROUGH STRONG CORPORATE GOVERNANCE
We believe integrity is key to our long term sustainability. We have an audit committee solely composed of independent directors and an Internal Audit Department reporting to the Chairman of the Board and the Audit Committee, which strengthens its independence. We have a Business Conduct Compliance Officer reporting to the CEO and a compliance department that oversees SOX certifications and related party transactions. Our employees are trained and accountable for ensuring a transparent behavior. We have established different policies, codes and procedures for this purpose. In addition, we have confidential channels to report non-compliant behavior.

FOSTERING THE STEEL INDUSTRY VALUE CHAIN IN MEXICO AND ARGENTINA
We support 1,600 small and medium-sized enterprises (SMEs), customers and suppliers, through our ProPymes program. ProPymes provides training, industrial projects and business consultancy, institutional assistance, commercial support and financial aid. The program plays an active role at universities, business schools, government agencies and industrial associations. ProPymes has helped create an industrial network that encourages the professionalization and quest for excellence of SMEs.

OUR PEOPLE. A program for recently-graduated professionals is at the core of a strategy
to recruit and retain talent.

DEEP TIES WITH OUR COMMUNITIES
We believe that having deep ties with our communities is also fundamental to the company's long- term sustainability. We are having a significant positive impact on our communities, both from a human perspective as well as in terms of economic development. We work together with local institutions to enhance their education and welfare. We provide scholarships, internships, teachers' training and infrastructure funding. We also organize and fund volunteering programs and health prevention campaigns, and sponsor sports, social and arts events.

7. Annual Report 2018

CHAIRMAN'S LETTER

2018 was a very good year for Ternium. Shipments rose 12% to a record 13 million tons as we incorporated a full year of sales from our new slab producing facility in Brazil. EBITDA rose 40% to a record $2.7 billion reflecting favorable market pricing conditions as well as the increase in shipments. Net income rose to $1.7 billion, representing 14.5% of net sales. This included the results of our investment in Usiminas, which had another good year as it continued to improve its profitability and balance sheet. Our financial position was strengthened with net debt reduced to $1.7 billion ahead of our planned increase in capital expenditures to fund our organic expansion strategy. And we are pleased to propose a further increase in the annual dividend to $1.20 per ADS.

In a presidential election year in Mexico, with additional uncertainty generated by the ongoing negotiations and ratification of the new USMCA agreement, Ternium’s sales in the country remained stable, thanks to its strong positioning in the high value automotive and industrial sectors. Demand was more affected in the construction and infrastructure development sectors reflecting a decline in public and private investment activity. In these conditions, we focused on improving our customer service and strengthening our product capabilities, as well as designing and preparing for the installation of our planned hot-rolling mill in Pesquería. Our investment program over the next two years will focus on building this new mill, which will integrate high quality slabs from our facility in Brazil and enable us to broaden our range of high-end products. During 2019, we will also start-up new galvanizing and painting lines in Pesquería to expand our product offering for the industrial steel markets.

The Roberto Rocca Technical School in Pesqueria, Mexico, continues to strengthen its role at the heart of a growing community and open opportunities for young students. Now, in its third year, the school has an almost full complement of 374 students. We have invited other industrial companies in Nueva Leon to join us in sponsoring students and offering internships in their operations and have received a strong response. We are proud that a team from the school was invited to the final of the World Educational Robot Contest in Shanghai where it placed 18th out of the 200 finalists from around the world.

The Argentine economy in 2018 was hit by its worst drought in more than 50 years, a tightening of global credit conditions, which drastically reduced the availability of foreign credit, and continued lack of growth in the neighboring Brazilian economy. This resulted in the onset of a deep recession in the second part of the year with a steep currency devaluation and very high interest rates and inflation. Although shipments held up well in the first half of the year, overall shipments declined 8% year on year with recovery not expected before the second half of 2019.

In this respect, in November 2018 ProPymes launched in Argentina a new program to help our small and medium-sized customers boost exports to offset weakening local sales. Through our constant support of ProPymes, we are working to strengthen the industry value chain in Argentina and Mexico, by supporting smaller suppliers and customers build operations that can be globally competitive and giving them access to resources through our financial strength, global positioning and focus on training and education. We support 1,600 small and medium enterprises through this program and this year, with the economic situation in Argentina, our support has been particularly relevant.

In Brazil, we completed what has been a highly successful integration of the CSA slab mill with the rest of the Ternium industrial system, accompanied by a deep interchange of best practices. Production of steel slabs rose to a record 4.6 million tons as we focused on increasing equipment availability and reliability, improving labor productivity and reducing costs. The further integration with our production system in Mexico will bring additional opportunities for efficiencies and improving our product offer in the coming

years. In addition, we completed the certification of our Rio de Janeiro's environmental management system under ISO 14001. This achievement has enabled us to reach a 97% certification rate based on total employees and contractors working in our steel making and steel processing facilities throughout Ternium.

We have updated Ternium's environmental and energy policy to incorporate additional elements on energy efficiency management in line with ISO 50001, an energy efficiency management standard under which our Rio de Janeiro unit is already certified. We also participated in the launch of a new program, led by worldsteel and the International Energy Agency, to identify the best available technologies to reduce the industry's carbon emissions.

In Colombia, we advanced with our investment plan to install a rebar mill with annual capacity of 520,000 tons, which is expected to start up in the second half of 2019. This investment will enable us to reduce imports and increase our participation in the dynamic Colombian construction sector. We performed preliminary work on the field to preserve wildlife before starting the construction of the new facilities in a drive to reduce our footprint as much as we can. We continuously seek the highest standards of environmental and energy performance as a basis for sustainable development for our employees, our communities and future generations.

Our safety indicators continue to improve. We are absolutely committed to improving all aspects of our safety performance. We pursue this through implementing the most rigorous international standards throughout our operations, constantly working to improve risk awareness and align employee behavior patterns with these fundamental values, and investing to modernize our facilities.

We have a rich agenda in front of us with the planned transformation of our industrial system and product development capabilities through our expansion project in Mexico and implementation of Industry 4.0 manufacturing technologies. As a leading industrial company in Latin America, we aim to set new standards in industrial and technological excellence, customer service and competitive differentiation.

Our performance over the past years together with our highly motivated team of professionals position us well for the challenges in front of us. Looking ahead, I would like to stress the high levels of uncertainty in the political and economic environment we are facing in our main markets, as well as the impact of the recent Vale tailings dam accident in Brazil on the pricing and logistics of iron ore supply for the steel industry. In our mining operations in Mexico, while we had already introduced stricter standards to the stability studies and as a result carried out reinforcements in certain areas of Peña Colorada´s tailings dams, we will continue to review the stability and enhance the monitoring of our dams.

I would like to thank our employees for their efforts and achievements during the past year. I would also like to thank our customers, suppliers and shareholders for their continuing support and confidence in our company.

March 18, 2019
Paolo Rocca
Chairman

ECONOMIC &
FINANCIAL
HIGHLIGHTS

RECORD RESULTS IN 2018
Ternium produces flat and/or long steel products in Mexico, Brazil, Argentina, the United States, Colombia and Guatemala. We report steel shipments under three geographical regions: Mexico, the Southern Region (encompassing the steel markets of Argentina, Bolivia, Chile, Paraguay and Uruguay)and Brazil and Other Markets (referred to in this document as Other Markets).

During 2018, shipments in the Mexican market were 6.5 million tons, representing 51% of Ternium’s total steel shipments. The Mexican manufacturing sector performed well in 2018, yet the country's construction market remained weak reflecting low public and private investment. Shipments in the Southern Region reached 2.3 million tons in 2018, or 18% of Ternium’s consolidated shipments in the steel segment. Most of Ternium’s shipments in the region are destined for the Argentine market. Activity levels in Argentina's manufacturing and construction sectors have declined since September 2018, following a solid performance during the first half of the year. By year-end 2018, activity levels were significantly lower than those recorded in December 2017. Shipments in the Other Markets region reached 4.1 million tons in 2018, or 32% of Ternium’s consolidated shipments in the steel segment. Our major shipment destinations in the Other Markets region are the United States, Brazil, Colombia and Central America.

Net sales of steel products in 2018 increased 18% compared to net sales in 2017, reflecting a 1.4-million-ton increase in shipments and a $47 increase in steel revenue per ton. Shipments have increased mainly as a result of the consolidation of Ternium Brasil since September 2017, partially offset by lower demand for steel products in the Southern Region, and slightly lower shipments in Mexico. Revenue per ton in 2018 was higher than in 2017 as a result of higher steel prices in Mexico and in Other Markets.

EBITDA rose 40% to $2.7 billion in 2018. EBITDA margin reached 24%, remaining at an industry-leading level. Net income attributable to Ternium's equity owners was $1.5 billion, or $7.67 per ADS, a 70% increase year-over-year. In 2018, the company’s capital expenditures were $520.3 million, $110.8 million higher than in 2017, including the effect of the consolidation of Ternium Brasil since September 2017. The main investments carried out during the period included those made in new hot-rolling, hot-dipped galvanizing and pre-painting production capacity in the company's Pesquería industrial center in

Mexico, improvement of environmental and safety conditions at certain facilities, the upgrade and expansion of two hot strip mills, the expansion of connectivity and equipment automation, and those made in Peña Colorada's iron ore operations.

STEEL SHIPMENTS (2018)

ECONOMIC VALUE GENERATED AND DISTRIBUTED (2018)

10. Ternium

	2018	2017	2016	2015	2014
STEEL SALES VOLUME (THOUSAND TONS)					
Mexico	6,544.8	6,622.8	6,405.2	5,933.4	5,632.2
Southern Region	2,301.1	2,456.0	2,220.8	2,552.2	2,510.9
Other Markets	4,105.2	2,517.7	1,138.1	1,114.6	1,238.5
Total	12,951.1	11,596.6	9,764.0	9,600.3	9,381.5
FINANCIAL INDICATORS ($ MILLION)					
Net sales	11,453.4	9,700.3	7,224.0	7,877.4	8,726.1
Operating income	2,108.4	1,456.8	1,141.7	639.3	1,056.2
EBITDA [1]	2,697.7	1,931.1	1,548.6	1,073.1	1,471.0
Equity in earnings (losses) of non-consolidated companies [2]	102.8	68.1	14.6	(272.8)	(751.8)
Profit before income tax expense	2,031.6	1,359.8	1,118.5	267.1	234.9
Profit (loss) for the year attributable to:					
Owners of the Parent	1,506.6	886.2	595.6	8.1	(198.8)
Non-controlling interest	155.5	136.7	111.3	51.7	94.6
Profit (loss) for the year	1,662.1	1,022.9	706.9	59.8	(104.2)
Capital expenditures	520.3	409.4	435.5	466.6	443.5
Free cash flow [3]	1,219.0	(25.5)	664.1	856.8	62.4
BALANCE SHEET ($ MILLION)					
Total assets	12,547.9	12,122.6	8,322.9	8,062.6	9,690.2
Financial debt	2,037.0	3,221.9	1,218.6	1,521.0	2,164.8
Net financial debt [4]	1,734.9	2,748.3	884.3	1,132.3	1,801.5
Total liabilities	5,063.3	6,269.8	3,156.3	3,259.6	4,055.5
Capital and reserves attributable to the owners of the parent	6,393.3	5,010.4	4,391.3	4,033.1	4,697.2
Non-controlling interest	1,091.3	842.3	775.3	769.8	937.5
STOCK DATA ($ PER SHARE/ADS[5])					
Basic earnings (losses) per share	0.77	0.45	0.30	0.00	(0.10)
Basic earnings (losses) per ADS	7.67	4.51	3.03	0.04	(1.01)
Proposed dividend per ADS	1.20	1.10	1.00	0.90	0.90
Weighted average number of shares outstanding[6] (million shares)	1,963.1	1,963.1	1,963.1	1,963.1	1,963.1

(1) EBITDA is operating income adjusted to exclude depreciation and amortization.
(2) Equity in earnings (losses) of non-consolidated companies includes in 2014 and 2015 impairment charges on the Usiminas investment of $739.8 million and $191.9 million, respectively. No impairment was registered in 2016, 2017 and 2018.
(3) Free cash flow equals net cash provided by operating activities less capital expenditures.
(4) Net financial debt equals total financial debt less cash and cash equivalents plus other investments.
(5) Each ADS represents 10 shares.
(6) Shares outstanding were 1,963,076,776 as of December 31 of each year.

CONSOLIDATING OUR LEADERSHIP IN THE MEXICAN FLAT STEEL MARKET. A new hot-dipped galvanizing facility and a new painting line that includes the most advanced painting technology in Mexico for high-end steel products.

350,000 TONS Annual hot-dipped galvanizing capacity.	120,000 TONS Annual painting capacity.	$280 MILLION Total investment.	2019 EXPECTED START UP

INNOVATION

WE FOSTER and reward breakthrough initiatives in our quest for excellence and improvement. Our teams are at the helm of our efforts to transform our industrial systems and business models in this high-speed change era.

14. Ternium

We strive to run safe operations, creating value for our customers, increasing productivity, enhancing the value chain's competitiveness, achieving a highly efficient and sustainable industrial base and establishing a long-term presence in thriving communities. These tasks require our commitment to a continuous quest for excellence and improvement, and a culture of innovation throughout our organization. We believe that a fresh approach to old and new challenges and staying up-to-date with the fast-paced changes in technology are key elements required to achieve step changes in our activities, including health and safety management, environmental stewardship, energy efficiency, product and process development, training design and community improvement.

The "Ternium Innovates" program is a contest that encourages our employees to team up to develop new ideas. This program is one of many initiatives that seek to foster a spirit of innovation. In this contest, we choose winners according to their ability to improve the way the company does things in four main areas: quality, workplace climate, productivity and safety. A committee reviews the ideas presented by the different teams, many of which are selected for implementation.

ADVANCING OUR DIGITAL TRANSFORMATION PROCESS

Since Ternium's origins in 1969, with the inauguration of the Ensenada manufacturing unit in Argentina, our company has acquired various steelmaking and steel processing facilities in Mexico, Brazil, Argentina, Colombia, the United States and Central America. The implementation of Ternium's business model, a coordinated industrial system able to offer a wide range of products and differentiated services to its customer base, required a significant digital transformation effort. The start was a set of diverse information technology (IT) systems inherited from each of the acquired companies. For example, the acquisition of Hylsamex and Grupo Imsa in Mexico, in 2005 and 2007, respectively, required the consolidation of 28 different information technology systems into one single system. With that target in mind, within a couple of years, we brought our company online in real time with a single unified information technology system spanning all of our facilities. Once this process was over, Ternium extended its digital tools to its customers and suppliers, enabling the integration of our

processes with theirs. We developed and launched a digital marketplace called "WebService". Today, approximately 80% of Ternium’s commercial customers use this tool to achieve an efficient interaction with us.

In May 2017, after a two-year preparation process, our company certified its IT system under the ISO 20,000 standard. This standard describes the best practices in the management of an organization's IT processes and services. This certification process has helped the company to optimize costs, resources and processes, enhance customer satisfaction, strengthen the performance assessment of our information technology system, increase compliance with multiple regulations, and increase overall business competitiveness. All of these technologies need to be protected by appropriate cybersecurity controls. Cybersecurity is one of the cornerstones of Ternium’s digital transformation. In addition to extending the connectivity of our manufacturing processes within the processing plants, we are connecting devices to the Internet (internet of things) and performing big data analytics on the enormous

INSPECTION AT HEIGHT. The drone technology replaces manual inspection, thus eliminating complex tasks.

INNOVATION

WEBSERVICE, AN INNOVATIVE
DIGITAL PLATFORM

Webservice has transformed the way in which many customers interact with Ternium, offering differentiated services to strengthen our partnership.
It has 75 functions covering the entire customer relationship process, such as:

- mobile product catalogs
- order placement (end-to-end orders, sale from stock, or bidding and auction)
- production monitoring
- inventory monitoring
- transportation tracking
- on line payment (direct connection with banks)

IN-HOUSE MONITORING. Ternium runs its own 24/7 monitoring center to oversee all operations and services.

amount of data generated by our production lines. All these new technologies require to be adequately protected against unauthorized access.

Currently, we are moving towards the construction of a SMART factory, the acronym for Social, Mobile, Analytics, Robotics and (internet of) Things. This concept, supported by Ternium's information technology platform, ensures a constant stream of knowledge and information (data and events) that will lead our facilities to a more productive and efficient evolutionary stage. Users achieve a more efficient performance by interacting from any location (offices, facilities or elsewhere) through different kinds of devices. Over 1,000 employees working in our industrial and commercial areas are equipped with mobile devices that enable them to perform all their tasks from anywhere with a remarkable increase in productivity.

Analytics and data correlation detect patterns for various applications to increase safety and efficiency, and to reduce costs. Through video-feed analysis (machine learning), new applications include real-time detection and reporting of unsafe situations or behavior within the facilities to prevent accidents and, using drone technology, the identification of potential damages in either tall structures or confined spaces, whether internal and external, as well as the assessment of bulk material stockpiles.

Drone technology replaces human inspection at height and minimizes the risks inherent to this type of task. We are implementing a project consisting of the installation of 600 cameras for tracking operations in our Argentine and Mexican facilities through video analytics allowing the implementation of an early alarm system. The ultimate objective is to be able to react based on the early detection of deviations from protocols and to prevent accidents.

In addition, radio frequency identification (RFID) technology enables the automated handling of steel products in the yards, speeding up logistic operations and increasing safety. The aim of Ternium's RFID project is to identify and track each coil from the moment it reaches the yards until shipment, making inspections easier, improving inspectors' safety and reducing operations

timeframes. The tracking system has already been implemented in five stockpile yards in Mexico and is being implemented in another twelve yards in Mexico and Argentina. In May 2018, Ternium received an RFID project award granted by U.S. RFID Journal in the Best Logistics/Supply Chain RFID Implementation category.

In the maintenance area, analytics and data correlation technology has proved its potential with the prediction of failures two to three weeks in advance. Our objective for 2019 is to apply this technology to shield the strategic equipment of our continuous casters and other continuous mills, significantly reducing non-operational interruptions and, therefore, the impact on the production process. In order to support Ternium's analytics needs across all business functions, we are building a single technological platform, known as "Data Lake" platform, that meets all our big data and analytics requirements. Other projects aimed at improving safety and productivity are the use of virtual reality software for training purposes, the use of augmented reality for experts

providing remote assistance to operators, 3D printing and the use of 3D scanning for several applications. We have also developed virtual reality software to train employees on risk perception. This software simulates risky situations in 3D, depicting potential sequences that could end up in fatal accidents. In addition, we have successfully finished the proof-of-concept stage for replacing on-site crane training exercises with VR training facilities, simulating the cabins of the three types of cranes used by Ternium: magnetic crane, hook crane and dump. Moreover, we have developed a virtual reality software to train our personnel on specific operating procedures performed in the secondary metallurgy area of our steel shop in Argentina. We are also developing a project in Mexico to train employees in water leakage protocols and in projects to improve productivity using digital twin technology. This technology generates a digital replica of physical assets, processes, people, places, systems and devices that can be used for various purposes. Ternium has two administrative robots in operation, running automated processes and tasks in the areas of

VR TRAINING. Virtual reality offers a safe environment to train employees and avoid operational interruptions.

INNOVATION

accounts payable, accounts receivable, sales back office and industrial engineering administration. We are advancing projects to gain productivity in accounts payable tasks in Mexico and Argentina, where more than 50% of all suppliers' invoices are expected to be loaded in our systems using robots.

A COLLABORATIVE APPROACH TO RESEARCH ACTIVITIES

Steel is a highly versatile metal, offering a wide space for product innovation. For example, over 70% of the structural steel parts used to build a car today involve solutions that simply did not exist 20 years ago. Ternium's production strategy is based on offering a complete range of value-added, high-end products, with an emphasis on creating and manufacturing increasingly sophisticated steel products for new applications and industries.

The properties of the steel products required by our customers are usually the result of a combination of their metal composition and the way metal gets processed into finished steel products. Ternium has identified synergies in collaborating with its customers in the early stages of their projects. Anticipating our customers' upcoming steel product requirements, through our participation in joint development projects, is key not only to build customer

AUTOMOBILE INDUSTRY CERTIFICATIONS
Number of certifications approved

relationships but also to plan and develop new processes, which may sometimes require the incorporation of new equipment and technology.

At Ternium, we carry out applied research efforts in different ways. We develop steel products through in-house programs, joint projects with leading industrial customers, joint efforts together with recognized universities or research centers, or through our participation in international consortia.

Ternium's research programs are open to a broad-based international network of industry consortia. Over 50 universities and research laboratories from both the public and private sectors collaborate with us. The goal is to find and develop the best solutions to support an agenda aimed at achieving better and more sustainable steel. The research spans the entire production cycle, from primary steelmaking and metallurgy, to rolling and galvanizing. In 2017, Ternium joined WorldAutoSteel, an organization comprising 22 of the world's major steel producers. Under the auspices of worldsteel, the group regularly updates the automotive industry on upcoming new steel capabilities available to meet their design and manufacturing requirements.

INVESTMENT IN PRODUCT RESEARCH AND DEVELOPMENT
$ million

NEW LABORATORY.
During 2018, we
inaugurated a new laboratory in Pesquería, Mexico, to strengthen our product research capabilities for high-end industrial requirements.
140
NEW PRODUCTS / YEAR
Developed through joint projects with customers and institutions.

Over the last five years, Ternium has achieved an average of 100 product development projects per year in partnership with industrial customers, and a total of 40 research projects involving university researchers and students from some of the world’s most prestigious institutions. We have been increasingly engaging universities in our research efforts in order to expand and further diversify Ternium’s research network and capabilities. This initiative fosters the development of fundamental knowledge and know-how at participating universities while enabling the optimization of Ternium’s in-house research resources. In 2018, approximately twenty undergraduate and postgraduate students pursuing degrees in engineering, materials science and metallurgy took part in the program.

INVESTING TO INCORPORATE NEW EQUIPMENT AND TECHNOLOGIES
The inauguration of the Ternium Industrial Center in Pesquería, Mexico, in 2013, gave way to an intensive

product development period. We widened our product range offering to include sophisticated high-end steel products required by the manufacturing industry, particularly automotive manufacturers. These developments were made possible with the incorporation of new production technologies to our industrial system through the new Pesquería unit. Furthermore, the installation in 2015 of state-of-the-art cooling technology in our hot strip mill in our Churubusco unit, Mexico, has allowed developing and processing new advanced high-strength steel grades, including dual phase, ferrite-bainite, martensitic and complex phase grades. Based on these new capabilities, we have further widened our high-end product portfolio for customers in the automotive, metal-mechanic, home appliance, oil & gas and electric motors industries.

HEALTH & SAFETY

SAFETY FIRST (primero seguridad), two words and a statement to convey a primary value for the company. Our employees have a mandate to observe this value and promote and share our policies with our communities.

20. Ternium

Ternium has a policy guiding its efforts to achieve excellence in occupational health and safety. According to this policy, the assessment of risks and management of our people's health and safety must be integrated in all our business processes. Management is responsible and accountable for achieving excellence in health and safety performance as part of a comprehensive set of goals. Ternium ranks occupational health and safety performance as its top priority with the conviction that all injuries and work-related illnesses can and must be prevented. Each of our employees' and contractors' health and safety is our top concern, and nothing justifies putting people at risk.

Ternium has a unified health and safety management system to oversee its production units. The company periodically certifies its procedures, which helps us find new opportunities to improve our safety management systems and ensure their compliance with our policy. Ternium’s steelmaking and steel processing facilities in Mexico, Argentina, Colombia and Guatemala are certified under the Occupational Health and Safety Assessment Series (OHSAS) 18001 standard, a concerted effort by leading national standards bodies, certification bodies and specialist consultancies to develop high quality management systems.

Our new facility in Rio de Janeiro, Brazil, is implementing new health and safety tools within its management systems, leveraging on the experience we gained in other facilities. During 2019, this new management system will undergo ISO 45001 certification. While ISO 45001 draws on OHSAS 18001, it is a new and distinct standard due to be phased in gradually over the next three years. In addition, we are working on the certification process of our mining facilities in Mexico.

Management strives to foster a corporate culture embodying values centered on safety as an integral part of its everyday life, as unsafe behavior is the main cause of safety incidents and accidents in our plants. We are committed to training all our employees and contractors on the appropriate application of the company’s health and safety management systems in performing their tasks, and to raising awareness of risks. In 2018, the company delivered 564,341 safety training hours to 18,609 employees and contractors.

ON THE RIGHT PATH. Ternium’s safety indicators have improved over the course of the years concomitant with our relentless quest for zero incidents and accidents.

LOST TIME INJURIES FREQUENCY RATE
Quantity of day-loss injuries per million hours worked

INJURY FREQUENCY RATE
Total quantity of injuries per million hours worked

HEALTH & SAFETY

SAFETY FIRST

Our Safety First program shows a number of initiatives to foster a more comprehensive safety culture to prevent incidents and accidents. Under the Safety Hour program, middle and senior managers tour operating areas for an hour, three times a week, talking to employees about safety conditions in their working environment. This exchange helps identify potential risks and enables a fluid and constructive feedback to implement effective preventive measures. In 2018, the company held a total of 116,347 Safety Hour sessions, with the regular participation of 1,016 employees and contractors, which helped to detect, record and correct 87,112 deviations.

TEN LIFE-SAVING RULES

Ten Life-Saving Rules is a document that consolidates the main principles of Ternium's safety program. It lists ten basic actions that all employees must follow in order to protect their own lives and those of their colleagues. The rules are the result of a process that included the contribution of focus groups together with different stages of analysis to detect the main causes of risks in our operations. These rules also reflect the scope of safety regulations in the countries where our company operates, and are backed by specific behavioral procedures and routines that must be followed. The Ten Life-Saving rules have been extensively communicated throughout Ternium's operations to foster employees' and contractors' awareness, and are in addition audited to ensure their observance. In 2018, we held 63,774 Ten Life-Saving Rules compliance audits.

SAFETY MANAGEMENT OF CRITICAL FACILITIES AND PROCESSES

Iron ore mining, steelmaking and steel processing activities include potentially hazardous processes. With the assistance of DuPont, a renowned authority in industrial safety, we performed a diagnosis and identification of process hazards at critical processes in our facilities in Mexico, Argentina, Brazil and Colombia, and developed safety management tools for those critical processes. We are now working on the sustainability of the prevention system to continue consolidating a safe administration of our critical processes.

In addition, in 2018 we adopted stricter standards to assess tailings dams, and as a result the dams of our joint

TERNIUM'S ANNUAL SAFETY DAY.

Since 2014, every July 22nd we have been holding our Annual Safety Day,
a special occasion to prompt a renewed commitment to improving safety and increasing risk awareness, in the belief that every accident can and must be prevented.

During this event, we hold safety management meetings and discussions to review our performance in the past year and agree on concrete action to improve safety in every facility.

venture with ArcelorMittal are being reinforced. Following the collapse in January 2019 of a tailings dam at a mine operated by Vale S.A., or Vale, in Brumadinho, Brazil, we decided to conduct new studies on the stability of our dams and on the dams of our joint venture with ArcelorMittal. Together with this, we are reanalyzing all operating and emergency protocols in connection with our mining activities.

OCCUPATIONAL HEALTH AND SAFETY POLICY

Ternium, an integrated steel company, along with its subsidiaries is committed to the occupational safety and health of its personnel, clients, contractors, and suppliers.
The company's occupational safety and health policy is the baseline for sustainable development across all its operations.

Policy adherence, dissemination, and compliance apply and are to be promoted throughout Ternium and its subsidiaries.

Looking out for the occupational safety and health of every person who works for the company or is inside its facilities is an essential value.

To that end, we promote our commitment through the following principles:
All work-related injuries and illnesses can and should be prevented.
Compliance with all applicable legal and other regulations to which Ternium voluntarily agrees.
Continuous improvement of all processes related to staff's health and safety.
Occupational safety and health must be integrated into all company processes.
No emergency situation, production process or results justify putting people's occupational safety or health at risk.
Commitment from and training of the entire staff is essential.
Working safely is an employment condition.
Every person is responsible for looking after his/her own safety and the safety of others.

In each company, everyone is responsible for occupational health and safety:
The company provides the means and resources for activities to be carried out safely so as to preserve everyone's physical integrity and occupational health.
Managers are in charge of the occupational health and safety of everyone who works for them or is in their area.
All other workers must comply with regulations and instructions, and work with their managers to detect, control, and resolve any dangerous situations.
Contractor companies and their staff must comply with the Safety Regulations in force at the facilities where they provide services.
People who enter the facility must comply with the applicable Safety Regulations.
Health and Safety staff must take preventive measures through support, advising and auditing.

At Ternium and its subsidiaries, these principles are shared throughout the entire value chain and in all the communities where it operates in order to promote people's healthcare and safety.
March 2018

Máximo Vedoya
CEO
Ternium

ENVIRONMENT

WE GROW our business to meet the demand for more and better steel products. In doing so, we take care of our footprint through continuous progress in environmental performance and the use of best available technologies.

24. Ternium

The protection of the environment is a fundamental value for Ternium. Our goal is to reach the highest standards of environmental performance in order to minimize the environmental footprint of our operations. To achieve this, we are continuously working on the improvement of our integrated production system. Our Environmental and Energy Policy, approved in 2014 and updated in 2018, states our views regarding the preservation of the environment.

As stated in our policy, the monitoring of our activities leans on a unified environmental management system throughout all our production units. We periodically audit and certify our systems and procedures. This process helps us to identify improvement opportunities, update our environmental management processes and make sure we comply with the latest legal regulations.

Our environmental management system is certified under ISO 14001. This standard was created by the International Organization for Standardization, a network of national standardization institutes that work together with governments, the industry and consumer representatives with the purpose of supporting the implementation of an environment management plan in public and private organizations. In 2018, we completed the certification of our new facility in Rio de Janeiro, Brazil. This achievement has enabled us to reach a 97% certification rate based on total employees and contractors working in our steel making and steel processing facilities.

Our Rio de Janeiro unit has, in addition, an energy efficiency management system certified under ISO 50001. The aforementioned update of Ternium's Environmental and Energy Policy in 2018 formally integrates energy efficiency concepts and establishes the principles for the implementation of energy efficiency management systems in all our production units. During 2018 we started implementing a newly developed energy efficiency system in our steel making facilities, which we expect will help us maximize our efforts to reduce carbon emissions. These efforts are in line with those of the countries in which we have operations and contribute to achieving the goals of the Paris Agreement of the UN's climate change conference.

EMISSION INTENSITY
Carbon dioxide emissions per ton of steel produced. Year-end.

ENERGY INTENSITY
Gigajoules per ton of steel produced. Year-end.

ENVIRONMENT

ENERGY AND CLIMATE

The steel industry is energy intensive. There are two main technologies for producing steel: the blast furnace / basic oxygen furnace (BF/BOF) route, which consumes mainly iron ore and uses metallurgical coal as its main energy source; and the electric arc furnace (EAF) route, which consumes mainly steel scrap and/or direct reduced iron and uses electricity as its main energy input. Direct reduced iron is produced out of iron ore and uses natural gas as its energy source. According to worldsteel, the world average carbon dioxide emission per ton of liquid steel, which depends on the efficiency of the facilities and the mix of steel production technologies, reached 1.8 tons in 2018.

In 2018, Ternium's steel production technologies included the BF/BOF route with a 63% participation, the EAF route with direct reduced iron feed and steel scrap with a 30% participation, and the EAF route with full steel scrap feed with a 7% participation. Ternium's average carbon dioxide emission per ton of liquid steel, including direct and upstream energy and other emissions, was 1.7 tons in 2018. The incorporation of our Rio de Janeiro steel mill (BF/BOF) increased our emissions rate since 2017, due to a higher share of BF/BOF route in steel production.

The steel industry has a strong commitment towards the reduction of greenhouse gas (GHG) emissions. According to worldsteel, in the last 50 years the steel industry reduced its energy consumption per ton of steel produced by 60%. In addition, the development of new steel product designs has enabled the use of lighter structures with improved resistance and performance. Yet, steel production accounts for approximately 8% of all human-made GHG emissions.

As members of worldsteel, we are signatory of its sustainability policy and join its efforts, through our participation in several programs, to reduce carbon dioxide emissions. As a participating member, we submit to worldsteel our performance indicators to contribute to its statistics and databases, which enable steelmaking companies to benchmark performance, share best practices and ultimately set improvement plans for their industrial processes.

In 2008, worldsteel launched its Climate Action Recognition Program. Since then, Ternium has been collecting and reporting its carbon dioxide emissions to worldsteel. In 2018 we participated in the launch of a new program, led by worldsteel and the International Energy Agency, with the purpose of creating a technology roadmap for iron and steel. This new initiative will help identify the best available technologies to reduce the industry's carbon dioxide emissions.

As part of our initiatives to reduce GHG emissions, in 2014 we launched an energy efficiency program aimed at identifying opportunities and implementing energy savings solutions at our production facilities on a continuous basis. Under this program we have completed 265 projects that, in the aggregate, have reduced our yearly carbon dioxide emissions by approximately 123,000 tons.

AIR QUALITY

The steelmaking process, under the main production routes, is intensive in the generation of particulate material, nitrogen oxides and sulfur oxides. Some of our facilities, like the Ternium Industrial Center in Pesquería, adopted the best-available technologies from the design phase. In other facilities, particularly those we acquired, we are consistently adopting the best-available technologies as part of our drive to continuously improve our environmental performance.

These improvement plans require significant investments in new equipment, such as de-dusting systems, material and scrap- handling facilities or briquetting facilities to clean and recycle material recovered from air emissions. Over the last four years, we have made investments of over $90 million to improve the capture and treatment of air emissions, especially in our Guerrero and Apodaca mills in Mexico, and our Manizales mill in Colombia. In 2018, we advanced our projects for a new de-dusting system at our steel shop in the Puebla unit in Mexico, which we expect to start up during 2019. In addition, we developed an investment plan consisting in the installation of several stations equipped with advanced monitoring technology. This new technology enables the immediate detection and alert of air quality indicators, in order to implement timely preventive actions.

26. Ternium

ENVIRONMENTAL CERTIFICATIONS

LEED. We design our facilities considering the best available building solutions. In Pesquería, Mexico, our technical school and the industrial buildings of our production facilities were certified under the Leadership in Energy and Environment Design Certification standards of the U.S. Green Building Council.

Clean Industry. In Mexico, most of Ternium's steel and in-use mining facilities have Clean Industry certificates issued by the local environmental authorities. The standard of this program was created by the Mexican government and ema, a technical rating and standardization institute.

WATER MANAGEMENT

Water is a scarce resource and we are committed to using it responsibly. We design our water management strategy on a case-by-case basis in accordance with the specific situation at each of our operating sites. Over the last few years, we carried out a series of investments to incorporate best available technologies in the management of water. We have implemented a zero discharge treatment plant from the design stage in our Pesquería unit in Mexico, and we have incorporated treatment plants for sewage water in our Churubusco and Pesquería units in Mexico.

In addition, in our San Nicolás unit in Argentina we invested in new equipment to close the gas scrubbing circuit of a blast furnace, and we developed new runoff water capturing systems for the raw material yards.

MATERIAL EFFICIENCY

In Ternium we continuously develop strategies to maximize the use of co-products and reduce the production of waste. We believe that the recovery and proper use of co-products is central to the application of circular economy concepts in the steel industry's value chain. The use of co-products reduces the consumption of raw materials and energy, with a positive effect on carbon dioxide emissions and waste generation.

All the steel scrap generated in our facilities is recycled. In addition, we purchase steel scrap generated by other steel processors in our value-chain and by the recycling of steel waste. In 2018, we recycled 2 million tons of steel scrap, including scrap generated in our facilities, to produce new steel with all its properties.

All granulated slag generated in the blast furnaces is sold to the cement industry. The re-use of slag enables yearly carbon dioxide emission savings of 1.0 million tons in the cement production process. Likewise, the slag generated in the steel shop is used to consolidate roads.

In addition, we have sinter and briquetting facilities that enable us to recycle different materials captured by our air and water cleaning equipment, including fines of iron ore, coal, lime and dolomite.

ENVIRONMENT

CO-PRODUCTS (T)
Million tons of co-products Million tons of CS production
n Co-products
l Crude steel (CS)

CARBON DIOXIDE RECYCLING. Our steel shops in Puebla and Guerrero, Mexico, capture carbon dioxide. The purpose of this innovative solution is to deliver carbon dioxide to the beverage industry for preparing soft drinks. The delivery of recycled carbon dioxide from our facilities enables yearly emission savings of up to 210,000 tons.

The preparation of metallurgical coal for the steelmaking production process yields significant co-product gas volumes. Those gases stem from the distillation process in the coking batteries. We clean those coking battery gases and obtain chemical products that we sell in the market, including tar, benzol and hydrated lime. In addition, the gases obtained from the coking batteries, blast furnaces and, in the case of the Rio de Janeiro unit, the steel shop, once cleaned, are used to provide heat to certain equipment and to produce steam for the generation of electricity. All these processes have enabled us to achieve a material efficiency rate of 99.7%.

BIODIVERSITY CARE
Our Rio de Janeiro unit is located near a coastline area rich in mangroves in the Sepetiba bay in Brazil, where we have our own port. We perform our operations while maintaining and protecting the fauna and flora of 600 hectares of mangroves. Likewise in Palmar de Varela, Colombia, before starting the construction of a new steel bar processing facility, we performed preliminary work on the field to preserve the local biodiversity. We defined different areas of ecological connectivity between our terrain and the natural ecosystems. We developed a program to rescue and release wildlife in those areas and we installed wildlife connectivity gates for reptiles, amphibians and small mammals.

INNOVATION AND RECYCLING - Mix Rock®
Mix Rock® is an innovative product developed by Ternium in Mexico. The product is obtained through the processing of our steel shops' dust and slag. With this development, we can transform 100% of our EAF dust into a valuable raw material for the cement industry while enabling lower carbon dioxide emission in the cement production process. This project was shortlisted for worldsteel's 2018 steelie awards.

28. Ternium

ENVIRONMENT AND ENERGY POLICY

Ternium is an integrated steel company committed on preserving the environment.
Its goal is to achieve the highest standards in environmental and energy performance as a basis for sustainable development throughout its operations in regards to company employees, the community and future generations. The company has committed to develop a high-quality performance integrated and eco-efficient production system based on continuous improvement.

Caring for the environment is a fundamental value, and its principles are the following:

Compliance with the applicable legislation, as well as any voluntary agreements in relation to environmental protection and energy use, consumption and efficiency.
All levels in each area, throughout the company, are responsible for the results of environmental protection.
The commitment of all our personnel is essential, as is the training provided.
Environmental protection and energy efficiency are responsibilities of Ternium’s staff as well as its subsidiaries, suppliers and contractor personnel.
Environmental and energy components are an integral part of the company's management processes.
Continuous improvement in environmental and energy performance is actively promoted through the company, in addition to all the efforts necessary to achieve the objectives and established goals.
Pollution must be prevented at the source, controlling the most significant environmental aspects of our operations and minimizing their impacts and risks.
Promoting the acquisition of energy efficient products, technologies, services and implementing projects that enhance our energy performance.
Use energy and natural resources efficiently.
Encourage the use of best technologies and practices, as well as renewable energies, when feasible.

In each company, everyone is responsible for environmental and energy management:
The company supplies the means and resources to enable compliance with this policy, thereby supporting the sustainability of all operations, depending on the operations context.
All persons entering company facilities, such as own personnel, suppliers, contractors and customers, must comply with this policy.

The company seeks to share these principles throughout its value chain and across the communities where it operates, to promote the protection of the environment, encourage the efficient use and consumption of energy resources and foster an open dialogue with stakeholders.

This Policy applies to Ternium and its subsidiaries. It will be actively disseminated with a view to ensuring compliance throughout the organization.
June 2018

Máximo Vedoya
CEO
Ternium

GROWTH OPPORTUNITY IN COLOMBIAN LONG STEEL MARKET. A new reinforcing bar facility to expand our participation in the construction sector in the north/northwest of Colombia, a region with no local steel bar production.

520,000	$90	180	
TONS	MILLION	EMPLOYEES	2019
Annual hot-rolling capacity.	Total investment.	To work in the new facilities.	EXPECTED START UP

HUMAN RESOURCES

WE FEEL STRENGTHENED as we grow and achieve an increasingly diverse employee base across the Americas. We work on long-term strategies to maximize their potential leaning on development and training.

Over the last decade, Ternium has become a leading flat steel producer in the region by virtue of its main asset: a team of committed, innovative, industrious, diverse and highly qualified individuals. In 2018, Ternium's team was composed of approximately 20,500 persons, the majority of whom are distributed throughout our facilities and offices in the Americas. As Ternium embarks on a new phase of growth for the coming years, we rely on the talent and determination of our people to successfully shape our company in this new stage.

Ternium has a Human Resources policy guiding our efforts in managing talent and attracting, retaining and helping motivated professionals to develop their careers. Ternium is an equal opportunity employer that embraces diversity in its different forms, including age, gender, nationality, race, ethnicity and creed. We believe that the coexistence of diverse perspectives and angles helps our teams achieve rational solutions to challenges and more effectively accomplish their goals.

Over the years, we have grown increasingly diverse and we will continue to welcome and adopt new and different viewpoints. Mexicans, Argentinians, Brazilians, Colombians, Guatemalans and Americans account for the largest share of our team members, yet a total of 31 nationalities are represented among our staff. We have recently launched a Diversity Policy to strengthen our commitment and formalize our initiatives in this field. In addition, our Code of Conduct forbids unlawful discrimination in employment relations and grants all persons the right to apply for a position in the company or to be considered for a new position based on the skills required.

Since 2006, we periodically commission international consultancy agencies to conduct confidential surveys among our employees. The company develops corporate and regional action plans based on the results of those surveys, and tackles areas of opportunity to improve overall labor climate. In 2018 we completed a new poll covering 16,700 employees across our operations, including salaried and hourly employees.

WORK CLIMATE. We look for ways to improve our employees' working experience. Innovative programs, such as alternative offices with remote connection and flexible days every month, all year-round, were well received.

96%
OVERALL SATISFACTION
Surveyed hourly employees, on working at Ternium.

87%
OVERALL SATISFACTION
Surveyed salaried employees, on working at Ternium.

HEADCOUNT
# of people

HUMAN RESOURCES

SALARIED EMPLOYEES BY GENDER
# of people
n Men
n Women

SALARIED EMPLOYEES BY NATIONALITY
December 2018

The overall participation rate reached 88% of targeted employees. The findings from the analysis of the poll included the following:

- Hourly employees. 96% of surveyed participants indicated overall satisfaction in their responses; 97% stated that they felt proud of working at Ternium.
- Salaried employees. 87% of surveyed participants indicated overall satisfaction in their responses; 95% stated that they felt proud of working at Ternium.

In 2018, Ternium's resignation rate was 3%.

DEVELOPMENT AND TRAINING
Ternium's constant pursuit of excellence in our operations requires our teams to consolidate and progress in their quest for continuous improvement and innovation. We believe training is a key tool to achieve this goal. Over the last five years, each salaried employee has received an average of 44 hours per year of training and each hourly employee has received an average of 108 hours per year of training, including on-the-job classes.

Ternium's program for professionals spans a person’s entire career, from his initial level as a young professional to management levels. Our program for supervisors includes a 40-hour course discussing the components of the supervisory role. This course has received the Excellence in Practice Award from the Association for Talent Development. A total of approximately 1,100 supervisors have completed the course since its launch in 2015. During 2018, our supervisors received an average of 90 hours of training.

The Leaders’ Development Program provides dedicated training for the company’s current and future leaders. The course is designed to enhance middle management leadership skills, as they advance their careers. Approximately half of the company’s middle-level managers have taken part in the program. The leadership course is a joint effort with the EGADE Business School of Monterrey, Mexico, and the Torcuato Di Tella University of Buenos Aires, Argentina. As of year-end 2018, the program involved 61 participants.

PERFORMANCE MANAGEMENT
The individual performance of each of Ternium's salaried employees is assessed annually through a formal performance assessment process. There is a link between

the feedback and the final instances provided by the evaluation process, and the different aspects of an employee's corporate life, such as compensation and career development, performance improvement opportunities and training requirements.

Ternium has an IT system to manage its performance assessment processes. The system includes a set of measurable objectives for each employee. This is a key component of the process as it ensures that everyone’s goals are in line with the company’s objectives and guarantees transparency and fairness in the assessment of each employee’s work throughout the year. The set of objectives is assessed through a combination of different sources: the employee himself, internal customers, assessment committees and feedback meetings, as well as mid-year reviews.
In addition, the system includes an upward feedback tool for management positions accessible to the manager’s supervisor. Although this tool is not

EMPLOYEES TRAINING
Average hours of training per year and employee
n Supervisors
n Hourly Employees
n Salaried Employees

mandatory, 74% of our employees provided upward feedback in 2018's performance assessments, which is an indication of the credibility achieved by Ternium´s procedures.

A performance assessment process based on a measurable set of objectives is an important aspect of our Human Resources Policy. It aims at improving our employees’ working experience throughout their careers and their relationship with their supervisors.

During 2018, the company introduced new features to enhance its performance assessment systems, which enabled the consolidation of a 360-degree approach to the process. The new features offer employees additional options to provide and receive assessments, including the possibility of submitting spontaneous client-supplier opinions related to specific objectives, and the introduction of more clearly-worded descriptions for the upward feedback review stage.

UPWARD FEEDBACK
%
n Employees that evaluated their supervisor
n Supervisors with at least one evaluation

VALUE CHAIN

WE SUPPORT the development of our small and medium-sized customers and suppliers under a long-term commitment.
We understand that the future of our industrial project is connected to that of our communities and value chain.

36. Ternium

Ternium offers support to small and medium sized enterprises (SMEs) through a program that provides a variety of services, including training, industrial assistance, institutional assistance, commercial support and financial aid. With the participation of approximately 1,600 companies, our program, called ProPymes, fosters the industrial value chain in Mexico and Argentina. ProPymes has helped create an industrial network that encourages the professionalization and quest for excellence of SMEs, which, based on knowledge sharing, reciprocal learning and exchange of experiences, aims at the implementation along the whole value chain of the best practices utilized in the industry.

ProPymes designs and implements an annual training agenda, among other initiatives. The course contents are continuously updated to keep pace with the new requirements of managers and their salaried and hourly employees. Every year the program incorporates additional subjects to the curriculum to meet SMEs´ increasingly sophisticated range of needs, as they advance their learning curves. Training activities are performed in-house or at universities or business schools. During 2018, ProPymes has sponsored training courses for 4,700 attendants, who spent an aggregate 92,000 hours in class.

PROPYMES' SPONSORED INDUSTRIAL PROJECTS
# of projects
n Mexico
n Argentina

ProPymes' industrial assistance programs focus on a broad array of issues from the use of automation technology and the optimization of production facilities, to the development of environment, health and safety protocols and human resources management. During 2018, ProPymes delivered over 400 industrial projects.

The institutional assistance program helps SMEs develop strategies aimed at ensuring a level playing field in the local market, given the potential threat of increased unfairly traded imports. Assistance efforts included those for the setting of industry chambers, the development of technical standards for industrial products and institutional initiatives aimed at improving SMEs competitiveness. In addition, we help SMEs set their own corporate social programs through the implementation of a support program for technical educational institutes.

PROPYMES AND INNOVATION. Under ProPymes sponsorship, a trailer manufacturer, a transportation company, a development center and Ternium set up a team to develop high-performance trailers. In 2018, Mexico’s Automotive Industry Cluster granted this project its 2018 Award in "Innovation".

VALUE CHAIN

TECHNICAL GENE. In 2013, ProPymes incorporated Ternium's Technical Gene initiative to its programs.

Aimed at enhancing the quality of technical education, Technical Gene coordinates the efforts of SMEs and their communities to improve technical educational institutes, and train their teachers and students.

Commercial support initiatives include the promotion of commercial ties between SMEs and potential customers in the automotive sector and other industries in our value chain, and assistance in the development process required to become a supplier of a large company. In addition, we offer SMEs to leverage on the Techint Group's global network of commercial offices in order to enhance their market reach.

The financial assistance program aims at fostering investments to enhance productivity and increase installed capacity, taking advantage of government-sponsored low-cost financing instruments. Since its creation through to year-end 2018, the program has financed investment projects of Ternium's customers for an amount in excess of $100 million.

WHY AN SME WOULD NEED ASSISTANCE?
From time to time, Mexico and Argentina suffer periods of economic volatility. One of the consequences of these difficult times is that some industrial companies have no choice but to resize their operations to be able to withstand short-term challenges arising during such conditions. On the path to overcoming a short-term critical situation, their long-term growth strategies suffer. Consequently, their development plans are postponed, they fall behind their learning curves and are unable to reach their growth potential. Ternium believes that its role as a large industrial project is to work with SMEs to help them reach their potential, enhancing their professional, management and financial capabilities, and helping them participate competitively in both domestic and foreign markets.

The ProPymes program was first launched in Argentina in 2002, named after the acronym PYME, which in Spanish stands for SME. In Mexico, the program was introduced four years later. ProPymes institutionalizes the cooperation between Ternium and the company's small and medium-sized customers and suppliers.

ADVANCING THE SMEs AGENDA

SMEs making up Ternium's value chain are key players for the social integration of their communities, as they generate a substantial share of total industrial jobs. The ProPymes program plays an important role in advancing the SME policy agenda in Mexico and Argentina.

Ternium organizes major events under the auspices of the ProPymes initiative, bringing SME´s representatives together with government officials, economists and journalists to discuss the sector's economic context and outlook. In Mexico, the ProPymes biannual event showcases awards for SMEs excelling in areas such as industrial safety, logistics services, delivery, raw material handling and other services. The occasion also includes a Supplier of the Year award. In Argentina, the event is held every year and features several panels designed to allow SME executives share their experiences and lessons learned.

Since 2017, the Argentine government sponsors the Ecosistema Pyme program, or SME Ecosystem, which considers the ProPymes program a model to be replicated by other large companies in the support of their value chains. In Argentina, the stories of SMEs that are part of Ternium's ProPymes program appeared in video-narrations published in the web platform of one of the country's largest media groups and have been widely circulated on social media. Different companies founders and owners were featured sharing how their enterprises started and grew, the difficulties they had to overcome, and the potential they envisage for the future.

PROPYMES SPONSORED TECHNICAL SCHOOLS

# of Schools

39. Annual Report 2018

COMMUNITIES

OUR COMMUNITY programs reflect the values and heritage
of our corporate history, emphasizing education as a
source of personal and social development, with a special focus on technical schooling.

40. Ternium

With more than seventy years of industrial experience, Ternium´s corporate history has inspired our work with our communities along these years, which is guided by an underlying premise: We believe that the long-term success of an industrial project depends on the support it receives from the community around it and on its ability to grow together with its neighbors.

We have developed and carried out several programs in education, arts and culture, health and sports, and social integration areas together with local institutions. We support initiatives that improve life quality and strengthen institutions that foster education and welfare, and promote a culture of hard work, diversity and social mobility.

Access to quality education is limited in several communities in Latin America, resulting in a lack of qualified technicians and professionals required by the industrial sector. On top of this, the industry is going through a technological transformation process, known as Industry 4.0, which demands workers with increasingly sophisticated skills and knowledge. Among our educational initiatives, we devote significant efforts to technical schools, in the knowledge that the steel manufacturing industry seeks to recruit skilled employees who need a solid education all the way through to tertiary level. In 2018, our educational programs accounted for 65% of our total community investment.

THE ROBERTO ROCCA TECHNICAL SCHOOL
In 2016, Ternium inaugurated the Roberto Rocca Technical School (ETRR) in Pesquería, Mexico. Our sister company in the Techint Group, Tenaris, opened the first ETRR in Campana, Argentina, in 2013. These modern schools are the spearhead of an international educational network geared towards providing high-quality technical education.

The ETRR in Pesquería offers two specializations, mechatronics and electromechanics. By December 2018, 374 young students were attending classes at the school, a number that is close to its capacity. All students have different levels of scholarships, depending on their needs. The first cohort of students will graduate by mid-2019,

following three years of studies. We have invited other companies in the state of Nuevo León, Mexico, to join efforts to fund scholarships for current and future students. The list of sponsor companies already includes Kia Motors, Corporativo Alfa (and its affiliates Nemak, Sigma, Alpek, Axtel and Newpek), Festo, Techgen, Praxair, Dedutel, Denso and Rheem. The school´s students started their internships in the industrial plants of these companies.The ETRR in Pesquería is equipped with state-of-the-art laboratories and classrooms, and the building itself obtained the gold category of the LEED environmental certification awarded by the U.S. Green Building Council. The school uses a Project Based

SUPPORT IN NUMBERS. We invested $60 million in community programs
in the last five years, including
$29 million in our flagship educational program, the Roberto Rocca Technical School in Pesquería, Mexico.

COMMUNITY PROGRAMS
$ million
n Ongoing programs
n ETRR in Pesquería, Mexico

COMMUNITIES

TECHNICAL GENE PROGRAM – TEACHERS TRAINED
# of Teachers

TECHNICAL GENE PROGRAM – PARTICIPANTS
# of Students

Learning methodology in technical classes, an innovative way to learn and develop teamwork and leadership skills. The ETRRs holds standardized testing for math, reading and socio-emotional skills including items from the Program for International Student Assessment (PISA) Math and Reading tests.

During 2018, five teams from the ETRR in Pesquería participated in the Mexican national championship of the World Educational Robot Contest. One of the teams succeeded to the international final in Shanghai, China, reaching the 8th place in its category and the 18th place in the overall score among over 200 teams that took part in the contest.

SPONSORING PUBLIC TECHNICAL SCHOOLS
At Ternium, we have developed the Technical Gene program designed to support technical education. Under this program, we support several state-run technical schools near our facilities in the Ramallo and Ensenada industrial areas in Argentina, and the Monterrey industrial area in Mexico. This endeavor has contributed to a significant improvement in the training level of graduates. In addition to Ternium, this program involves local governments and the Hermanos Agustín y Enrique Rocca foundation, a non-governmental organization committed to community development.

The program provides technical internships at workshops and at operating areas of the company’s industrial centers. In addition, it organizes technical training programs in the schools, and an annual innovation contest targeting pro-community projects. Moreover, the program offers activities for teachers and managers to strengthen teaching skills and the management of the schools, funds the expansion and improvement of school infrastructure, and provides new technical equipment.

During 2018, we initiated the sponsorship of a new technical school in Mexico. We will start our activities in the new school as soon as we get governmental authorizations. In addition, under this program 146 high-school students completed their internships in our mills in Argentina and Mexico. 110 high-school students participated in the innovation contest in Argentina, in which we evaluated proposals for community projects. In addition, one technical school in San Nicolas inaugurated a new 468 square meters building, housing the new physical/chemical and electro-mechanics laboratories.

VOLUNTEERING TO IMPROVE BASIC SCHOOLS
Ternium's employees and their families volunteer to improve local schools infrastructure. Students' relatives, schoolteachers and neighbors join us in the endeavor. Ternium and the Hermanos Agustín y Enrique Rocca foundation, as well as other companies operating in our value chain, provide organization and funding. So far, 29 schools have been revamped in Mexico, Argentina, Brazil, Colombia and Guatemala. During 2018, 1,644 volunteers joined efforts to transform nine schools. Following the integration of the company's new plant in Rio de Janeiro, during the year we undertook our first volunteering activity in Brazil. In 2018, our community programs in Brazil received the Parceiros da Escola award from the country's education minister.

We also coordinate help for communities facing natural disasters. During 2018, Ternium and other affiliate companies built 191 houses for families affected by the September 2017 earthquakes in southern Mexico. The

cost of this project was entirely financed by Ternium and its employees.

QUALITY EDUCATION FOR THE COMMUNITIES
Ternium has different programs aimed at improving skills and education in developing communities near its facilities. We organize workshop academies in Pihuamo, Aquila and Alzada in Mexico. In addition, through the Afterschool program, we provide support to primary schools in San Nicolás de los Garza, Mexico, and in Ramallo, Argentina. The Afterschool program fosters
the integration and stay of the students in the classrooms, and seeks to improve the quality of education. The program was very successful, evidenced by a substantial increase in student enrollment and the extension of activities outside school hours. Afterschool also helps improve the schools' infrastructure. In 2018, the school in Ramallo inaugurated a new 273 square meters building, housing three new classrooms and a meeting room. In addition, we provided the required equipment and furniture. The enrollment in this school reached 398 students in 2018, representing a 70% increase since the launch of the initiative.

VOLUNTEERING PROGRAM. Ternium's employees and their families volunteered to improve the Japão municipal school in Santa Cruz, Rio de Janeiro, Brazil.

COMMUNITIES

SUPPORT TO HIGH-SCHOOL STUDENTS
Our Merit Awards program was founded in 1976 in Argentina, making it the longest-lasting program. Initially designed to benefit the children of our employees, in 2007 it was opened up to our communities. The program focuses on fostering academic excellence for high-school students. Scholarships are awarded based on academic performance, attendance and commitment to the educational process. In 2018, we awarded 712 scholarships.

ROBERTO ROCCA EDUCATION PROGRAM
Together with the Hermanos Agustín y Enrique Rocca foundation, Ternium funds scholarships for high-school and university students from local communities in Mexico, Argentina, Colombia and Guatemala. The program, called Roberto Rocca Education Program, has awarded fellowships and scholarships since 2005 to promote the study of engineering and applied sciences at undergraduate and graduate level in the countries where we have a major presence. In 2018, the program funded 12 fellowships for students pursuing PhDs and 276 scholarships for undergraduate students.

AFTER SCHOOL PROGRAM PARTICIPATION
# of Students
n Argentina
n Mexico

MERIT AWARDS
OF SCHOLARSHIPS

MEXICO	
2018	249
2017	135
2016	200
2015	125
ARGENTINA	
2018	348
2017	298
2016	317
2015	350
OTHER COUNTRIES	
2018	115
2017	111
2016	120
2015	90

ROBERTO
ROCCA
EDUCATION
PROGRAM

# OF SCHOLARSHIPS (2018)	
Mexico	92
Argentina	163
Colombia	16
Guatemala	5
Total	276

SPORTS AND A HEALTHY LIFESTYLE

As part of our drive to promote a healthy lifestyle, we organize the 10K Ternium annual local race in several locations, together with local institutions. In 2018, approximately 4,000 runners participated in the 14th edition of the 10K Ternium in San Nicolás, Argentina; approximately 5,000 runners participated in the 10th edition of the race in Monterrey, Mexico, and over 1,500 runners participated in the 7th edition of the 10K Ternium race in Colima, Mexico. The proceedings from the San Nicolás race, together with matching funds provided by Ternium, are donated to a local hospital. In addition, we organize sport leagues involving schools in neighboring communities with the participation of thousands of children. On health care initiatives, we organize health fairs, clinical examinations, and disease and addiction prevention campaigns, aimed at increasing the community's awareness and gaining of a basic understanding of how to prevent and take care of various health issues. In addition, the company supports and funds a basic health care unit in Aquila, Mexico, and funds improvements in health care infrastructure in different countries.

ARTS AND CULTURE TO FOSTER DIVERSITY AND INTEGRATION
Ternium's Art and Culture program aims to bring the company's diverse cultures together as well as to reinforce the identity of each community. Large audiences enjoy every year´s opera, ballet, concert and cinema festivals organized by Ternium together with local institutions.

Ternium's film festivals bring to employees and the community different movies from Latin American producers. In 2018, we held five film festivals in Mexico and Argentina, which were attended by approximately 10,000 persons. In San Nicolás, Argentina, Ternium also sponsors and organizes, along with the PROA Foundation, the Ternium Cultural Program at a local theater in San Nicolás, Argentina.

We also sponsor a photo library program, a way of honoring the history and tradition of the local communities by preserving and sharing their visual memoirs. In a joint effort with community organizations, curators source and compile historic photos into digital archives, painting a unique portrait of the past and present of these communities. As of 2018, the Photo Libraries in the cities of San Nicolás, Argentina, and Monterrey, Mexico, had digitized over 63,000 images.

10K Ternium race. A drive for a healthy lifestyle motivates us to organize races along with local entities. Thousands of runners dare beat every year the three and 10-kilometers challenges. The first 10K edition took place in 2008, in San Nicolás. Later on, we launched the race in Monterrey, Colima and Santa Cruz where it also became popular.

11,500	14
RUNNERS	EDITIONS
Participated in the 2018 edition.	Since the first race in San Nicolás.

GOVERNANCE

INTEGRITY is key to the long-term sustainability of our company. With ethical behavior and the observance of law as a core company value, we continuously work on building a corporate culture of integrity.

Ternium S.A. is organized as a public limited liability company (société anonyme) under the laws of the Grand Duchy of Luxembourg. The Company holds controlling stakes in steel companies operating in Latin America and the Southern United States. San Faustin S.A., the holding company of the Techint Group, an international group of companies, has a 62% controlling interest in Ternium.

San Faustin also has controlling interests in Tenaris, a global supplier of steel pipes and related services mainly for the energy industry which holds an additional 11% interest in Ternium; Tecpetrol, an oil and gas company; Techint, an engineering and construction company; Tenova, a supplier of equipment and technology for iron mining and steel; and Humanitas, a network of hospitals in Italy.

The Company has an authorized share capital of a single class of 3.5 billion shares having a nominal value of $1.00 per share. The general extraordinary meeting of shareholders held on May 6, 2015 renewed the validity of the Company's authorized share capital until 2020. As of December 31, 2018, there were 2,004,743,442 shares issued and outstanding, of which 41,666,666 are held in the Company's treasury.

The Company's ADSs are listed in the New York Stock Exchange. Each ADS represents ten shares. Holders of ADSs only have those rights that are expressly granted to them in the deposit agreement dated January 31, 2006, among the Company, The Bank of New York Mellon (formerly The Bank of New York), as depositary, and all owners and beneficial owners from time to time of ADRs of the Company. ADS holders may not attend or directly exercise voting rights in shareholders' meetings, but may instruct the depositary how to exercise the voting rights for the shares, which underlie their ADSs. Holders of ADSs maintaining non-certificated positions must follow instructions given by their broker or custodian bank.

Our articles of association provide that our annual ordinary general shareholders' meetings shall take place in Luxembourg, or in a foreign country whenever circumstances of force majeure take place, within six months from the end of the previous financial year.

COMMITMENT TO INTEGRITY THROUGH STRONG CORPORATE GOVERNANCE

- Audit committee (three independent directors)
- Internal Audit Department reporting to the Chairman and the Audit Committee
- Business Conduct Compliance Officer reporting to the CEO

- Compliance department that oversees SOX certifications and related party transactions
- Employee accountability and training to ensure transparent behavior
- Confidential channels to report noncompliant behavior

GOVERNANCE

SELECT CODES	POLICIES	PROCEDURES
Code of Conduct	Transparency Business Conduct	Disclosure Procedure (relevant information)
Code of Conduct for suppliers	Anti-Fraud Securities Trading	Transactions Between Related Parties
Code of Ethics for Senior Financial Officers	Diversity and Work Environment Free of Harassment Human Rights	Conflict Mineral Disclosure

At these meetings, our annual financial statements are approved and the members of our board of directors are elected. No attendance quorum is required at annual ordinary general shareholders' meetings and resolutions are adopted by a simple majority vote of the shares represented at the meeting. There are no limitations currently imposed by Luxembourg law on the rights of non-resident shareholders to hold or vote the Company's shares.

The Company's board of directors is currently comprised of eight directors, of whom three are independent under the articles of association and SEC regulations applicable to foreign private issuers. The board of directors has an audit committee consisting of three independent members. The charter of the audit committee sets forth, among other things, the audit committee's purpose and responsibilities, which include the responsibility to review material transactions with related parties to determine whether their terms are consistent with market conditions or are otherwise fair to the Company and/or its subsidiaries. In addition, the audit committee reports to the board of directors on the adequacy of the systems of internal control over financial reporting.

Ternium has adopted a Code of Conduct incorporating guidelines and standards of integrity and transparency that apply to all directors, officers and employees. In addition, it has adopted a Code of Ethics for Senior Financial Officers, a Transparency Policy governing relationships with third parties, a Policy on Business Conduct, a Code of Conduct for Suppliers, an Antifraud Policy, a Policy on Securities Trading, a Human Rights Policy and a Policy on Diversity and Work Environment Free of Harassment.

Ternium has an internal audit area that reports to the Chairman of the Board of Directors and, with respect to internal control over financial reporting, to the Audit Committee. The internal audit area evaluates and reassures the effectiveness of internal control processes, risk management and governance. Ternium established and encourages the use of a web-based anonymous compliance line to report situations contrary to the Code of Conduct, which operates according to the procedures designed by the internal audit area.

ACKNOWLEDGMENT. All our white-collar employees must confirm that they received and understood our Code of Conduct (CC) and Policy on Business Conduct (PBC), a condition for employment.

Ternium has a Business Conduct Compliance Officer reporting to the CEO of the Company, who has responsibility for identifying and mitigating corruption risks and fostering a culture of ethical and transparent conduct, and for designing, implementing and supervising a Compliance Program aligned with the requirement of applicable national and international laws against corruption and bribery. The Business Conduct Compliance Program is focused on preventive activities including risk assessment, normative, advising, communications, training, certifications, third parties, monitoring and auditing, discipline and remediation, and benchmarking.

Ternium purchases most of its supplies through Exiros, a specialized procurement company whose ownership we share with Tenaris. Ternium's suppliers undergo a rigorous process of selection to ensure governance standards are in place, in line with applicable laws and regulations and in accordance with our Health and Safety and Environmental policies and Code of Conduct. Our Code of Conduct for Suppliers covers ethical behavior, compliance with law, and health, safety and environmental stewardship.

BOARD OF DIRECTORS AND SENIOR MANAGEMENT

BOARD OF DIRECTORS

Chairman	Paolo Rocca
Vice-Chairman	Daniel Novegil
Directors	Ubaldo Aguirre (*) Roberto Bonatti Carlos Condorelli Vincent Decalf (*) Adrián Lajous (*) Gianfelice Rocca
Secretary	Arturo Sporleder

(*) Independent Directors and Audit Committee Members

SENIOR MANAGEMENT

Chief Executive Officer	Máximo Vedoya
Chief Financial Officer	Pablo Brizzio
Ternium Mexico President	César Alejandro Jiménez
Ternium Argentina President	Martín Berardi
Ternium Brasil President	Marcelo Chara
International Area President	Héctor Obeso Zunzunegui
Planning and Global Business Development General Director	Oscar Montero
Engineering, Industrial Coordination and EHS Director	Pablo Hernán Bassi
Quality and R&D Director	Rubén Herrera
Chief Information Officer	Roberto Demidchuck
Human Resources Director	Rodrigo Piña

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MANAGEMENT'S REPORT

RECORD RESULTS. We reported EBITDA of $2.7 billion, the highest in Ternium's history, with a 40% year-over-year increase. This strong performance led to earnings of $7.67 per ADS and free cash flow of $1.2 billion.

This review of Ternium’s financial condition and results of operations is based on, and should be read in conjunction with, the Company’s consolidated financial statements as of December 31, 2018 and 2017 and for the years ended December 31, 2018, 2017 and 2016 (including the notes thereto), which are included elsewhere in this annual report.

SUMMARY RESULTS

	2018	2017	Dif.
Steel shipments (tons)	12,951,000	11,597,000	12 %
Iron ore shipments (tons)	3,616,000	3,551,000	2 %
Net sales ($ million)	11,454.8	9,700.3	18 %
Operating income ($ million)	2,108.4	1,456.8	45 %
EBITDA ($ million)	2,697.7	1,931.1	40 %
EBITDA margin (% of net sales)	23.6 %	19.9 %	364 bps
EBITDA per ton ($)	208.3	166.5	25 %
Income tax expense ($ million)	(369.4)	(336.9)	10 %
Profit for the year ($ million)	1,662.1	1,022.9	62 %
Profit attributable to owners of the parent ($ million)	1,506.6	886.2	70 %
Basic earnings per ADS ($)	7.67	4.51	70 %

- EBITDA of $2.7 billion in 2018, a 40% year-over-year increase mainly as a result of higher EBITDA per ton and shipments.
- Earnings per American Depositary Share (ADS) of $7.67, a year-over-year increase of $3.16 per ADS.
- Capital expenditures of $520.3 million, up from $409.4 million in 2017.
- Free Cash Flow of $1.2 billion in 2018.
- Net debt position of $1.7 billion at the end of December 2018, a $1.0 billion decrease and equivalent to 0.6 times net debt to last twelve months EBITDA.

Operating income in 2018 was $2.1 billion, the highest on record, reflecting strong steel market prices in Mexico and the consolidation of Ternium Brasil. Ternium Brasil enabled us to integrate our operations and at the same time was able to take advantage of a strong slab market in 2018. Compared to 2017, operating income in 2018 increased $651.6 million, mainly due to 1.4 million-ton

(7) Steel operating cost per ton is equal to steel cost of sales plus steel SG&A, divided by shipments..

increase in steel shipments and $47 increase in steel
revenue per ton, partially offset by an $11 increase in steel operating cost per ton[7]. The increase in steel volumes was the result of higher shipments in the Other Market's region, due to the consolidation of Ternium Brasil's slab sales from September 2017, partially offset by a 155,000-ton decrease in the Southern Region and a 78,000-ton decrease in Mexico. The increase in steel cost per ton mainly reflected higher purchased slab and raw material costs, partially offset by higher integration in our operations.

Net income in 2018 was $1.7 billion, reflecting the strength of our operations and a low effective tax rate. The effective tax rate in 2018 included a $104.1 million tax gain due to the effect of an asset revaluation for tax purposes at Ternium's Argentine subsidiary. Compared to net income of $1.0 billion in 2017, net income in 2018 increased $639.2 million, mainly due to the above-mentioned higher operating income and low effective tax rate in 2018, and higher results from equity in earnings of Usiminas, partially offset by slightly higher net financial expenses.

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MANAGEMENT'S REPORT

NET SALES

Net sales in 2018 were $11.5 billion, 18% higher than net sales in 2017. The following table outlines Ternium's consolidated net sales for 2018 and 2017.

	NET SALES ($ MILLION)			SHIPMENTS (THOUSAND TONS)			REVENUE/TON ($/TON)		
	2018	2017	Dif.	2018	2017	Dif.	2018	2017	Dif.
Mexico	6,134.0	5,378.6	14 %	6,544.8	6,622.8	-1 %	937	812	15 %
Southern Region	1,933.4	2,313.6	-16 %	2,301.1	2,456.0	-6 %	840	942	-11 %
Other Markets	3,023.6	1,699.0	78 %	4,105.2	2,517.7	63 %	737	675	9 %
Total steel products	11,091.0	9,391.2	18 %	12,951.1	11,596.6	12 %	856	810	6 %
Other products [8]	362.4	309.1	17 %						
Steel reporting segment	11,453.4	9,700.3	18 %						
Mining reporting segment	282.0	271.5	4 %	3,616.3	3,551.1	2 %	78	76	2 %
Intersegment eliminations	(280.6)	(271.4)							
Net sales	11,454.8	9,700.3	18 %						

[8] The item "Other products" primarily includes Ternium Brasil's and Ternium Mexico's electricity sales.

STEEL REPORTABLE SEGMENT

Ternium produces flat and/or long steel products in Mexico, Argentina, Brazil, the United States, Colombia and Guatemala. We conduct our steel manufacturing activities through subsidiaries, including Ternium México S.A. de C.V. (Ternium Mexico), Ternium Brasil Ltda. (Ternium Brasil), Ternium Argentina S.A. (Ternium Argentina, a company in which we have a 61% equity interest), Ternium USA Inc. (Ternium USA), Ternium Colombia S.A.S. (Ternium Colombia), Ternium Guatemala S.A. (Ternium Guatemala), and Tenigal S.R.L. de C.V. (Tenigal, a Mexican corporation in which we own a 51% equity interest, with Nippon Steel & Sumitomo Metal Corporation having the remaining 49% interest).

We report steel shipments under three geographical regions: Mexico, the Southern Region (encompassing the steel markets of Argentina, Bolivia, Chile, Paraguay and Uruguay) and Other Markets.

Net sales of steel products in 2018 increased 18% compared to net sales in 2017, reflecting a 1.4-million-ton increase in shipments and a $47 increase in steel revenue per ton. Shipments increased 12% year-over-year mainly due to higher shipments in Other Markets, as a result of

the consolidation of Ternium Brasil from September 2017, partially offset by lower shipments in the Southern Region and slightly lower shipments in Mexico, reflecting lower demand for steel products in our two main markets. Revenue per ton in 2018 was higher than in 2017 as a result of higher steel prices in Ternium Mexico and in Other Markets.

Although steel prices in he Southern Region were relatively stable year-over-year, revenue per ton decreased due to the effect of inflation adjustment.

MEXICO

During 2018, shipments in the Mexican market were 6.5 million tons, representing 51% of Ternium's total steel shipments. Ternium is the leading supplier of flat steel products in the country. The Mexican steel market has been growing consistently, becoming the largest steel market in Latin America, with a consumption rate of more than 200 kilograms per capita. Apparent steel demand reached 25.9 million tons in 2018 with steady demand from the manufacturing sector and weak commercial markets, usually driven by construction activity, as a result of low public and private investment.

Within the Mexican industrial sectors, light vehicle production remained stable in 2018, reflecting an increase in the production of light trucks and a decrease in the production of sedans. As for sales, light vehicle exports increased and domestic shipments decreased. With 3.9 million units produced in 2018, Mexico ranks as the world's seventh largest motor vehicle manufacturer.

Ternium has participated in the expansion of this sector in Mexico through investments in steel manufacturing capacity, mainly the construction of an industrial center in Pesquería in 2013, and the upgrade of our hot-rolling mill in Churubusco in 2016. As a result, industrial customers now represent approximately 56% of our total shipments in the country.

Our modern facilities in Pesquería enabled the development of new value-added high-end products mainly for the automotive, home appliance and heating-ventilation-air conditioning (HVAC) industries. In addition, the installation of state-of-the-art cooling technology in the Churubusco hot-strip mill opened up the possibility of developing and processing new advanced high-strength steel (AHSS) grades. With these added capabilities, we are widening our high-end product portfolio for customers in the automotive, metal mechanic, home appliances, oil & gas and electric motors industries.

In September 2017, we announced the construction of a new hot-rolling mill in Pesquería. This facility will enable Ternium to expand its product range in Mexico with a broader dimensional offering and the most advanced steel grades, and reduce lead times in the value chain targeting the demanding and innovative automotive industry, as well as the home appliance, machinery, energy and construction sectors. The new hot-rolling mill will be supplied with high-end slabs produced in our facility in Rio de Janeiro as well as slabs purchased to third parties. The facility is expected to start up by the end of 2020.

In addition, during 2019 we will start up new hot-dip galvanizing and pre-painting facilities in Pesquería. These new mills will enable Ternium to produce additional high-end value-added products for the home appliance, HVAC and automotive industries.

Ternium's strategy aims at the offering of a full range product catalog, a significant local presence, logistics management and the introduction of new information

APPARENT STEEL USE - MEXICO
All products (million tons)
Source: worldsteel

LIGHT VEHICLE PRODUCTION - MEXICO
Million tons
Source: Mexican Automotive Industry Association

technology tools. For more information on the development of new products and services for our customers see the chapter "Innovation" in this annual report.

During the first quarter of 2018, steel prices in Mexico increased compared to those prevailing during 2017, supported by higher raw material costs in international markets. On March 8, 2018, the U.S. imposed a 25% tariff on steel imports under Section 232 of the U.S. Trade Expansion Act, which entered in force on March 23, 2018. The immediate consequence of that action was a steep increase in U.S. steel prices, which remained at very strong levels until August and normalized gradually thereafter. This price dynamic in the U.S. steel market influenced the Mexican market, as U.S. steel imports represent a large share of total steel imports into the Mexican market. Therefore, steel prices in Mexico in 2018 remained strong most of the year, returning by year-end to levels similar to those prevailing in 2017.

During 2018, Mexico and the U.S. advanced their trade negotiations. In November 2018, Mexico, the U.S. and Canada signed a new agreement to substitute NAFTA (called USMCA), which needs to be ratified by each country´s congress. Mexico, the U.S. and Canada are currently negotiating an agreement on Section 232 steel tariffs, which, if successful, should help normalize steel trade flows within North America.

Utilization rates in our integrated steelmaking facilities in Mexico remained high during 2018, achieving new record production levels in several facilities. We continued to maximize the use of direct reduced iron (DRI) in the metallic mix of our steel shops (produced in our natural gas-based iron ore direct reduction units), which remained being a cost efficient input vis-à-vis steel scrap. In our downstream facilities, including our re-rolling facilities, production rates showed a mixed performance year-over-year in 2018, in line with a weakening in steel demand. Towards the second half 2018, Ternium continued implementing the SMART factory concept, a digital transformation process that will lead our facilities to a more productive and efficient stage. For more information on SMART factory please see the chapter "Innovation" in this annual report.

Ternium's capital expenditures in the steel segment in Mexico amounted to $297 million in 2018, compared to $194 million in 2017. The main investments carried out during the period included the construction of new hot-rolling, galvanizing and pre-painting facilities in our Pesquería unit, the expansion of connectivity and equipment automation throughout Ternium Mexico's industrial system (SMART factory), and the improvement of environmental and safety conditions at certain facilities.

Capital expenditures are expected to increase in 2019 and 2020, as Ternium's investment in a new hot-rolling mill in Pesquería gains momentum.

SOUTHERN REGION

Shipments in the Southern Region reached 2.3 million tons in 2018, or 18% of Ternium's consolidated shipments in the steel segment, decreasing 6% year-over-year. Most of Ternium's shipments in the region are made in the Argentine market, where Ternium Argentina is the leading supplier of flat steel products. Apparent flat steel demand in Argentina decreased year-over-year in 2018 to approximately 2.6 million tons. The Argentine economy was affected during the year by weak agricultural production due to adverse weather conditions, financial market volatility and a significant increase in interest rates. Activity levels in the country's main flat steel consuming sectors experienced a significant decline during the second half of 2018. In addition, apparent flat steel demand was impacted during the fourth quarter by a destocking process in the value chain.

The construction sector, which showed a solid performance during the first half of the year, suffered a significant decline from September 2018 due to lower public infrastructure investment and a lack of credit for developers and mortgage borrowers. Likewise, vehicle production showed solid levels in the first half of 2018 and weakened significantly from September, reflecting a significant decrease in local vehicle sales partially offset by higher exports. In this scenario, construction activity and vehicle production in December 2018 fell 21% and 39%, respectively, compared to the levels achieved in December 2017.

Our product development efforts in Argentina focused on new high-strength steel applications for vehicles, trucks and heavy equipment, on attractive pre-painted steel finishings for the construction sector and home-appliance manufacturers, and on new products for wind and solar power mills. For more information on the development of new products and services for our customers see the chapter "Innovation" in this annual report.

The decrease in Ternium’s shipments in the Argentine market in 2018 was partially offset by increased year-over-year shipments in Bolivia. Economic activity in Paraguay, Bolivia, Uruguay and Chile continued growing at sustained rates during 2018.

Utilization rates in our crude steel production facilities in Argentina remained relatively stable in 2018 compared to 2017. In our downstream facilities, production rates decreased year-over-year in 2018 reflecting lower finished steel shipments. Ternium’s capital expenditures in the Southern

CONSTRUCTION INDICATOR - ARGENTINA
Growth (% year / year)
Source: Argentine Statistics Institute

Region, mainly in Argentina, amounted to $68 million in 2018, mainly related to the upgrade of the hot-rolling mill, the improvement of environmental and safety conditions, the expansion of connectivity and equipment automation, and maintenance activities.

OTHER MARKETS
Shipments in the Other Markets region reached 4.1 million tons in 2018, or 32% of Ternium’s consolidated shipments in the steel segment. Our major shipment destinations in the Other Markets region are the United States, Brazil, Colombia and Central America.

Shipments in this region in 2018 increased 1.6 million tons year-over-year, or 63%, including a 1.5 million-ton increase in slab shipments. On September 7, 2017, Ternium acquired CSA from thyssenkrupp
AG, a slab-making facility in Rio de Janeiro, Brazil, renamed it Ternium Brasil and started consolidating its financial statements as from that date. Consequently, 2018 is the first full year reflecting the

MOTOR VEHICLE PRODUCTION - ARGENTINA
Thousand units
Source: Argentine Automotive Producers Association

MANAGEMENT'S REPORT

effect of the consolidation of Ternium Brasil on our shipments in the Other Markets region.

Ternium Brasil has an agreement to supply slabs to thyssenkrupp AG’s former re-rolling facility in Calvert, Alabama, United States. Under this agreement, a total of 2.2 million tons of slabs will be supplied between January 2019 and December 2020. Slabs exports from Brazil to the U.S. are subject to a quota system and are, therefore, exempted from the 25% tariff set on steel imports under Section 232. In addition, Ternium Brasil ships slabs to other Ternium's subsidiaries, which are eliminated in the process of consolidation, and to third parties in Brazil and other countries.

Slab production in our Rio de Janeiro unit reached a record 4.6 million tons in 2018. Since we took over the facilities, we focused our efforts on increasing equipment availability and reliability. In addition, we improved labor productivity and reduced production costs. We are working on coordinating production and logistics plans between our Rio de Janeiro unit and our re-rolling mills in Mexico to further increase efficiency and reduce working capital.

In the United States, apparent demand for finished steel increased 2.3% year-over-year in 2018, on improved manufacturing activity and healthier economic performance. Ternium’s shipments of finished steel products in the country (excluding slab shipments to the Calvert facility) decreased in 2018 as steel imports from Mexico were affected by the 25% tariff set under Section 232. The company’s finished steel production in the United States increased slightly year-over-year in 2018, achieving new records.

In Colombia, Ternium is a leading supplier of finished steel products. With apparent steel use of 3.6 million tons, the country is the fourth largest steel

market in Latin America. After a decrease in steel demand in 2017, Colombia’s steel market stabilized in 2018. During the year, oil and gas activity continued recovering in the country. On the other hand, weak infrastructure investment and a slow recovery in residential building investment weighed on industry growth. Ternium’s shipments in the country increased slightly in 2018.

Ternium is advancing the construction of a new rebar hot-rolling mill in Colombia, with annual production capacity of 520,000 tons. The new facilities will enable us to expand market share in the construction sector by substituting imports in the north of the country. With a total investment of $90 million, the mill is expected to start operations by year end 2019.

Our capital expenditures in the Other Markets region amounted to $102 million in 2018, mainly related to the construction of the above-mentioned new steel bar processing facility in the north of Colombia, the improvement of environmental and safety conditions, and maintenance activities.

MINING REPORTABLE SEGMENT

Ternium produces iron ore pellets and magnetite concentrate in Mexico. We conduct our mining activities through Las Encinas S.A. de C.V. (Las Encinas), a company in which we have a 100% equity interest, and Consorcio Minero Benito Juárez Peña Colorada S.A. de C.V. (Consorcio Peña Colorada, a company in which we have a 50% interest with ArcelorMittal having the other 50%). ArcelorMittal and Ternium each receive 50% of total iron ore production of Consorcio Peña Colorada. In 2018, most of our iron ore production was consumed at Ternium’s steelmaking facilities in Mexico.

At the end of 2018, Las Encinas was operating the Aquila open pit mine, located in Michoacán, and the Las Palomas open pit mine, located in Jalisco, a small iron ore

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body where we started commercial operations during 2017. The Las Encinas facilities include two crushing plants located close to each of the Aquila and El Encino mines, and a concentration and pelletizing plant located in Alzada, Colima.

Consorcio Peña Colorada operates the Peña Colorada open pit iron ore mine, located in Colima. The Consorcio Peña Colorada facilities include a concentration plant located at the mine and a two-line pelletizing plant located near the Manzanillo seaport on the Pacific coast in Colima.

IRON ORE RESERVES (END OF 2018) (9)	Volume (million tons)	Average iron grade (%)	Estimated mine life (years)
Las Encinas (10)	20	40	7
Peña Colorada (11)	209	22	13

(9) Iron ore reserves, proven and probable, on a run-of-mine basis
(10) Includes exclusively the Las Encinas and Las Palomas mines
(11) Reported figures represent the total reserves at the Peña Colorada mine. Ternium has a 50% interest in Consorcio Peña Colorada

Net sales of mining products in 2018 were 4% higher than those in 2017, reflecting a 2% increase in shipments and a 2% increase in revenue per ton, with relatively stable utilization rates in Consorcio Peña Colorada's and Las Encinas' iron ore pellet production facilities. Capital expenditures in the mining segment in 2018, including Las Encinas and Ternium's share in Peña Colorada's capital expenditures, amounted to $53 million, mainly related to preparation works at new iron ore bodies and maintenance activities.

COST OF SALES
Cost of sales was $8.5 billion in 2018, an increase of $1.1 billion compared to 2017. This was principally due to a $883.5 million, or 15%, increase in raw material and consumables used, mainly reflecting a 12% increase in steel shipments and higher raw material and purchased slab costs, partially offset by lower energy costs; and to a $196.8 million increase in other costs,

mainly including a $108.1 million increase in depreciation of property, plant and equipment due to the full consolidation of Ternium Brasil and the effect of inflation adjustment in Argentina, a $47.6 million increase in services and fees, and a $39.1 million increase in maintenance expenses.

Reference prices in $ per ton

	Iron Ore	Hard Coking Coal	Slab
1Q 2016	48.0	76.6	245.9
	55.7	91.3	356.9

2Q 2016			
3Q 2016	58.5	135.3	321.2
4Q 2016	70.7	265.6	379.9
1Q 2017	85.6	169.3	418.6
2Q 2017	63.1	193.3	406.0
3Q 2017	70.8	188.9	451.8
4Q 2017	65.7	205.5	484.5
1Q 2018	74.3	228.3	547.6
2Q 2018	65.3	190.4	536.7
3Q 2018	66.7	188.8	515.0
4Q 2018	71.4	221.8	446.2

SELLING, GENERAL AND ADMINISTRATIVE (SG&A) EXPENSES
SG&A expenses in 2018 were $876.8 million, or 7.7% of net sales, an increase of $52.5 million compared to SG&A expenses in 2017 mainly due to higher freight and transportation expenses and labor costs, partially offset by lower services and fees expenses.

OTHER NET OPERATING INCOME
Other net operating income in 2018 was a $13.7 million gain, compared to a $16.2 million loss in 2017. Other net operating income in 2018 was mainly related to a recovery of tax credit in Ternium Brasil.

OPERATING INCOME
Operating income in 2018 was $2.1 billion, or 18.4% of net sales, compared to operating income of $1.5 billion, or 15.0% of net sales, in 2017. The following table outlines Ternium's operating income by segment for 2018 and 2017.

MANAGEMENT'S REPORT

$ million

	STEEL SEGMENT		MINING SEGMENT		INTERSEGMENT ELIMINATIONS		TOTAL	
	2018	2017	2018	2017	2018	2017	2018	2017
Net Sales	11,453.4	9,700.3	282.0	271.5	(280.6)	(271.4)	11,454.8	9,700.3
Cost of sales	(8,524.9)	(7,465.8)	(239.9)	(212.9)	281.5	275.6	(8,483.3)	(7,403.0)
SG&A expenses	(860.9)	(811.5)	(15.9)	(12.8)	—	—	(876.8)	(824.2)
Other operating income (expense), net	12.9	(17.0)	0.7	0.8	—	—	13.7	(16.2)
Operating income	2,080.6	1,406.0	26.9	46.6	0.8	4.1	2,108.4	1,456.8
EBITDA	2,618.5	1,830.5	78.3	96.4	0.8	4.1	2,697.7	1,931.1

EBITDA
EBITDA in 2018 was $2.7 billion, or 23.6% of net sales, compared to $1.9 billion, or 19.9% of net sales, in 2017.

NET FINANCIAL RESULTS
Net financial results amounted to a $179.6 million loss in 2018, compared to a $165.1 million loss in 2017. During 2018, Ternium’s net financial interest results totaled a loss of $109.9 million, compared with a loss of $95.2 million in 2017, reflecting higher average indebteness and a lower average cost of debt.

Net foreign exchange results included a $112.2 million year-over-year negative difference mainly related to the effect of the fluctuations of the Argentine and Mexican peso against the U.S. dollar. In 2018, the Argentine peso depreciated 51% against the U.S. dollar compared to 15% in 2017, resulting in a non-cash negative impact in Ternium Argentina’s U.S. dollar financial position (which applies the Argentine peso as functional currency).

Change in fair value of financial instruments included in net financial results was a $99.3 million loss in 2018 compared to a $3.1 million gain in 2017. The loss in 2018 was mainly related to certain derivative instruments entered into to compensate for the interest rate charges derived from Ternium’s Argentine subsidiary's financial debt denominated in local currency and currency derivatives in Mexico.

The effect of inflation on Ternium’s Argentine subsidiaries and associates’ short net monetary position was a gain of $191.4 million as a result of the application of IAS 29 from 2018.

USIMINAS
Improved performance and financial position in 2018.
• Steel shipments up 4%
• Iron ore shipments up

76%
• Adjusted EBITDA of BRL2.7 billion
(up 23%)
• Net debt/EBITDA of 1.6x
(down from 2.0x)

EQUITY IN RESULTS OF NON-CONSOLIDATED COMPANIES
Equity in results of non-consolidated companies was a gain of $102.8 million in 2018, compared to a gain of $68.1 million in 2017 mainly due to better results from Ternium's investment in Usiminas.

INCOME TAX EXPENSE
Income tax expense in 2018 was $369.4 million, or 18% of income before income tax, compared to an income tax expense of $336.9 million, or 25% of income before income tax in 2017. The unusually low effective tax rate in 2018 was mainly the result of a $104.1 million tax gain related to the effect of an asset revaluation for tax purposes at Ternium's Argentine subsidiary. In 2017,

the effective tax rate included a non-cash gain on deferred taxes due to the 5% appreciation of the Mexican peso against the U.S. dollar during the year which reduces, in U.S. dollar terms, the tax base used to calculate deferred tax at our Mexican subsidiaries (which have the U.S dollar as their functional currency).

LIQUIDITY AND CAPITAL RESOURCES

We obtain funds from our operations, as well as from short-term and long-term borrowings from financial institutions.

These funds are primarily used to finance our working capital and capital expenditures requirements, as well as our acquisitions and dividend payments.

We hold money market investments, time deposits and variable-rate or fixed-rate securities. We reduced our financial indebtedness to $2.0 billion at the end of 2018, from $3.2 billion at the end of 2017, mainly reflecting strong free cash flow less dividend payments in 2018. The following table shows the changes in our cash and cash equivalents for each of the periods indicated below:

In $ million

FOR THE YEAR ENDED DECEMBER 31,	2018	2017
Net cash provided by operating activities	1,739.3	383.9
Net cash used in investing activities	(457.0)	(2,030.0)
Net cash provided by (used in) financing activities	(1,322.3)	1,802.3
Increase (decrease) in cash and cash equivalents	(40.0)	156.2
Effect of exchange rate changes	(47.2)	(1.8)
Cash and cash equivalents at the beginning of the year	337.8	183.5
Cash and cash equivalents at the end of the year	250.5	337.8

OPERATING ACTIVITIES

Net cash provided by operating activities in 2018 was $1.7 billion. Working capital increased by $228.6 million in 2018 as a result of a $186.4 million increase in inventories and an aggregate $114.7 million net increase in trade and other receivables, partially offset by an aggregate $72.6 million increase in accounts payable and

other liabilities. The inventory value increase in 2018 was mainly due to $159.5 million higher volume and price of raw materials, supplies and other; and net $90.5 million higher costs of slabs, goods in process and finished goods principally as a result of the pass-through of higher purchased slab, scrap, coal and iron ore prices; partially offset by $63.6 million net lower steel volume.

$ million

CHANGE IN INVENTORY DEC'18/DEC'17	Price	Volume	Total
Finished goods	36.7	16.7	53.5
Steel goods to undergo processing	53.8	(80.3)	(26.6)
Total steel goods	90.5	(63.6)	26.9
Raw materials, supplies and other items			159.5
Total inventory			186.4

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MANAGEMENT'S REPORT

INVESTING ACTIVITIES

Net cash used in investing activities in 2018 was $457.0 million, primarily attributable to capital expenditures of $520.3 million and loans to non-consolidated company Techgen for a net amount of $24.5 million, partially offset by a decrease in other investments. The main investments carried out during 2018 included those made for new hot-rolling, hot-dipped galvanizing and pre-painting production capacity in the company’s Pesquería industrial center, improvement of environmental and safety conditions at certain facilities, the upgrade and expansion of two hot strip mills, the expansion of connectivity and equipment automation, and those made in Peña Colorada’s iron ore operations.

FINANCING ACTIVITIES

Net cash used in financing activities was $1.3 billion in 2018, primarily attributable to net repayment of borrowings of $1.1 billion and total dividend payments of $236.8 million ($215.9 million to the Company’s shareholders and $20.9 million to non-controlling interest).

PRINCIPAL SOURCES OF FUNDING

FUNDING POLICY

Management’s policy is to maintain a high degree of flexibility in operating and investment activities by maintaining adequate liquidity levels and ensuring access to readily available sources of financing. We obtain financing primarily in U.S. dollars, Argentine pesos and Colombian pesos. Whenever feasible, management bases its financing decisions, including the election of currency, term and type of the facility, on the intended use of proceeds for the proposed financing and on costs. For information on our financial risk management, please see note 29 “Financial risk management” to our consolidated financial statements included in this annual report.

Ternium has in place non-committed credit facilities and management believes it has adequate access to the credit markets. Considering this fact and the funds provided by operating activities, management believes that we have sufficient resources to satisfy our current working capital needs, service our debt and pay dividends. Management also believes that our liquidity and capital resources give us adequate flexibility to manage our planned capital spending programs and to address short-term changes in business conditions.

DIVIDEND PAYMENTS

$ per ADS

*Proposed dividend

FINANCIAL LIABILITIES

Our financial liabilities consist mainly of loans with financial institutions. As of December 31, 2018, these facilities were mainly denominated in U.S. dollars (98.7% of total financial liabilities). Total financial debt (inclusive of principal and interest accrued thereon) decreased by $1.2 billion in the year, from $3.2 billion as of December 31, 2017, to $2.0 billion as of December 31, 2018. As of December 2018, current borrowings were 19.6% of total borrowings, none of which corresponded to borrowings with related parties.

Net financial debt (total financial debt less cash and cash equivalents plus other investments) decreased by $1.0 billion in 2018, from $2.7 billion as of December 31, 2017, to $1.7 billion as of December 31, 2018. Net financial debt as of December 31, 2018 equaled 0.6 times 2018 EBITDA.

Ternium’s weighted average interest rate for 2018 was 3.7%, a decrease compared to the 4.8% average interest rate in 2017. This rate was calculated using the rates set for each instrument in its corresponding currency and weighted using the U.S. dollar-equivalent outstanding principal amount of each instrument as of December 31, 2018. The year-over-year decrease in average interest rates was due mainly to lower participation of Argentine peso

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denominated debt in the currency mix, as nominal interest rates in Argentina reflect high local inflation rates.

MOST SIGNIFICANT BORROWINGS AND FINANCIAL COMMITMENTS
Our most significant borrowings as of December 31, 2018, were those outstanding under Ternium

Investments S.à.r.l.'s (Ternium Investments) 2017 syndicated loan facility to finance the acquisition of Ternium Brasil and related transactions, Ternium Mexico's 2018 syndicated loan facility and Tenigal's 2012 syndicated loan facility.

$ million

DATE	BORROWER	TYPE	Original principal amount	Outstanding principal amount as of December 31, 2018	Maturity
2012/2013	Tenigal	Syndicated loan	200	100	July 2022
September 2017	Ternium Investments	Syndicated loan	1,500	1,125	September 2022
June 2018	Ternium Mexico	Syndicated loan	1,000[12]	400	June 2023

(12) From the original principal amount of $1.0 billion, $400 million were disbursed as of December 31, 2018. The remainder $600 million are available to be drawn until June 2019.
The main covenants in our syndicated loan agreements are limitations on liens and encumbrances, limitations on the sale of certain assets and compliance with financial ratios (e.g., leverage ratio). As of December 31, 2018, we were in compliance with all covenants under our loan agreements. Our most significant financial commitments as of December 31, 2018, were the following:

A corporate guarantee covering 48% of the obligations of Techgen under a syndicated loan agreement. Proceeds from the syndicated loan were used by Techgen for the construction of its facilities. As of December 31, 2018, Ternium's guarantee amounted to approximately $288 million, based on an outstanding loan amount of $600 million. The main covenants under the corporate guarantee are limitations on the sale of certain assets and compliance with financial ratios (e.g., leverage ratio). As of December 31, 2018, Techgen and Ternium, as guarantor, were in compliance with all of its covenants.

A corporate guarantee covering 48% of the outstanding value of transportation capacity agreements entered into by Techgen with Kinder Morgan Gas Natural de Mexico, S. de R.L. de C.V., Kinder Morgan Texas Pipeline LLC and Kinder Morgan Tejas Pipeline LLC starting on August 1, 2016 and ending during the second half of 2036. As of December 31, 2018, the outstanding value of this commitment was approximately $250 million. Our exposure under the guarantee in connection with these agreements amounts to $120 million, corresponding to 48% of the outstanding value of the agreements as of December 31, 2018.

For further information on our derivative financial instruments, borrowings, financial leases, commitments and financial risk management please see notes 22, 23, 24, 25 and 29 to our consolidated financial statements included in this annual report.

RECENT DEVELOPMENTS
TECHGEN REFINANCING
On February 13, 2019, Techgen entered into a $640 million loan agreement with several banks to refinance its obligations under the existing syndicated loan. Techgen's obligations under the new facility, which is non-recourse on the sponsors, will be guaranteed by a Mexican security trust covering Techgen' shares, assets and accounts as well as

Techgen's affiliates rights under certain contracts. For further information on this transaction please see note 30 to our consolidated financial statements included in this annual report.

ANNUAL DIVIDEND PROPOSAL

On February 19, 2019, the Company's board of directors proposed that an annual dividend of $0.12 per share ($1.20 per ADS), or approximately $235.5 million in the aggregate, be approved at the Company's annual general shareholders' meeting, which is scheduled to be held on May 6, 2019. If the annual dividend is approved, it will be paid on May 14, 2019. Ternium's dividend payments have been growing over the years, starting from $0.50 per ADS in 2006, the year of the initial public offering and listing.

CONSOLIDATED FINANCIAL STATEMENTS

As of December 31 2018,
2017 and for the years ended
December 31, 2018, 2017 and
2016
29 Avenue de la Port Neuve,
3rd Floor
L-2227 Luxembourg.
R.C.S Luxembourg B-98-668

TERNIUM S.A.
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FINANCIAL STATEMENTS

Audit Report

To the Board of Directors and Shareholders of
Ternium S.A.

Report on the audit of the consolidated financial statements

Our opinion

In our opinion, the accompanying consolidated financial statements give a true and fair view of the consolidated financial position of Ternium S.A. (the "Company") and its subsidiaries (the "Group") as at 31 December 2018, and of its consolidated financial performance and its consolidated cash flows for the year then ended in accordance with International Financial Reporting Standards (IFRSs) as adopted by the European Union.

What we have audited

The Group's consolidated financial statements comprise:

- the consolidated statement of financial position as at 31 December 2018;
- the consolidated income statement for the year then ended;
- the consolidated statement of comprehensive income for the year then ended;
- the consolidated statement of changes in equity for the year then ended;
- the consolidated statement of cash flows for the year then ended; and
- the notes to the consolidated financial statements, which include a summary of significant accounting policies.

Basis for opinion

We conducted our audit in accordance with the Law of 23 July 2016 on the audit profession (Law of 23 July 2016) and with International Standards on Auditing (ISAs) as adopted for Luxembourg by the "Commission de Surveillance du Secteur Financier" (CSSF). Our responsibilities under the Law of 23 July 2016 and ISAs as adopted for Luxembourg by the CSSF are further described in the "Responsibilities of the "Réviseur d'entreprises agréé" for the audit of the consolidated financial statements" section of our report.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

We are independent of the Group in accordance with the International Ethics Standards Board for Accountants' Code of Ethics for Professional Accountants (IESBA Code) as adopted for Luxembourg by the CSSF together with the ethical requirements that are relevant to our audit of the consolidated financial statements. We have fulfilled our other ethical responsibilities under those ethical requirements.

PricewaterhouseCoopers Société coopérative, 2 Rue Gerhard Mercator, B.P. 1443, L-1014 Luxembourg

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Other information

The Board of Directors is responsible for the other information. The other information comprises the information stated in the consolidated management report but does not include the consolidated financial statements and our audit report thereon.

Our opinion on the consolidated financial statements does not cover the other information and we do not express any form of assurance conclusion thereon.

In connection with our audit of the consolidated financial statements, our responsibility is to read the other information identified above and, in doing so, consider whether the other information is materially inconsistent with the consolidated financial statements or our knowledge obtained in the audit, or otherwise appears to be materially misstated. If, based on the work we have performed, we conclude that there is a material misstatement of this other information, we are required to report that fact. We have nothing to report in this regard.

Responsibilities of the Board of Directors and those charged with governance for the consolidated financial statements

The Board of Directors is responsible for the preparation and fair presentation of the consolidated financial statements in accordance with IFRSs as adopted by the European Union, and for such internal control as the Board of Directors 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, the Board of Directors 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 the Board of Directors 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.

Responsibilities of the "Réviseur d'entreprises agréé" for the audit of the consolidated financial statements.

The objectives of our audit 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 audit 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 the Law of 23 July 2016 and with ISAs as adopted for Luxembourg by the CSSF 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 the Law of 23 July 2016 and with ISAs as adopted for Luxembourg by the CSSF, we exercise professional judgment and maintain professional scepticism 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 and the reasonableness of accounting estimates and related disclosures made by the Board of Directors;

- conclude on the appropriateness of the Board of Directors' 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 audit 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 audit 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 and 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.

We also provide those charged with governance with a statement that we have complied with relevant ethical requirements regarding independence, and to communicate with them all relationships and other matters that may reasonably be thought to bear on our independence, and where applicable, related safeguards.

Report on other legal and regulatory requirements

The consolidated management report is consistent with the consolidated financial statements and has been prepared in accordance with applicable legal requirements.

PricewaterhouseCoopers, Société coopérative Luxembourg, 18 March 2019
Represented by
Marc Minet

CONSOLIDATED INCOME STATEMENTS	TERNIUM S.A. Consolidated Financial Statements as of December 31, 2018 and 2017 and for the years ended December 31, 2018, 2017 and 2016

All amounts in thousands U.S. dollars

YEAR ENDED DECEMBER 31,	NOTES	2018	2017	2016
Net sales	5	11,454,807	9,700,296	7,223,975
Cost of sales	6	(8,483,328)	(7,403,025)	(5,384,390)
Gross profit		2,971,479	2,297,271	1,839,585
Selling, general and administrative expenses	7	(876,764)	(824,247)	(687,942)
Other operating income (expenses), net	9	13,656	(16,240)	(9,925)
Operating income		2,108,371	1,456,784	1,141,718
Finance expense	10	(131,172)	(114,583)	(89,971)
Finance income	10	21,236	19,408	14,129
Other financial income (expenses), net	10	(69,640)	(69,915)	37,957
Equity in earnings (losses) of non-consolidated companies	14	102,772	68,115	14,624
Profit before income tax expense		2,031,567	1,359,809	1,118,457
Income tax expense	11	(369,435)	(336,882)	(411,528)
Profit for the year		1,662,132	1,022,927	706,929
Attributable to:				
Owners of the parent		1,506,647	886,219	595,644
Non-controlling interest		155,485	136,708	111,285
Profit for the year		1,662,132	1,022,927	706,929
Weighted average number of shares outstanding		1,963,076,776	1,963,076,776	1,963,076,776
Basic and diluted (losses) earnings per share for profit attributable to the owners of the parent (expressed in $ per share)		0.77	0.45	0.30

The accompanying notes are an integral part of these restated consolidated financial statements.

TERNIUM S.A.
CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME
Consolidated Financial Statements as of December 31, 2018 and 2017 and for the years ended December 31, 2018, 2017 and 2016

All amounts in thousands U.S. dollars

YEAR ENDED DECEMBER 31,	2018	2017	2016
Profit for the year	1,662,132	1,022,927	706,929
Items that may be reclassified subsequently to profit or loss:			
Currency translation adjustment	(376,220)	(95,462)	(141,665)
Currency translation adjustment from participation in non-consolidated companies	(73,761)	(8,931)	53,858
Changes in the fair value of financial instruments at fair value through other comprehensive income	(1,036)	—	—
Income tax related to financial instruments at fair value	122	—	—
Changes in the fair value of derivatives classified as cash flow hedges	(132)	735	641
Income tax relating to cash flow hedges	(73)	(107)	(192)
Other comprehensive income items	(897)	(96)	(1,542)
Other comprehensive income items from participation in non-consolidated companies	499	191	1,054
Items that will not be reclassified subsequently to profit or loss:			
Remeasurement of post employment benefit obligations	(38,263)	(15,068)	(14,735)
Income tax relating to remeasurement of post employment benefit obligations	9,259	4,916	2,571
Remeasurement of post employment benefit obligations from participation in non-consolidated companies	(3,780)	3,954	(15,817)
Other comprehensive loss for the year, net of tax	(484,282)	(109,868)	(115,827)
Total comprehensive income for the year	1,177,850	913,059	591,102
Attributable to:			
Owners of the parent	1,176,964	815,434	534,827
Non-controlling interest	886	97,625	56,275
Total comprehensive income for the year	1,177,850	913,059	591,102

The accompanying notes are an integral part of these restated consolidated financial statements.

CONSOLIDATED STATEMENTS OF FINANCIAL POSITION	TERNIUM S.A. Consolidated Financial Statements as of December 31, 2018 and 2017 and for the years ended December 31, 2018, 2017 and 2016

All amounts thousands U.S. dollars BALANCE AS OF DECEMBER 31,	NOTES	2018		2017	
ASSETS					
NON-CURRENT ASSETS					
Property, plant and equipment, net	12	5,817,609		5,349,753	
Intangible assets, net	13	1,012,524		1,092,579	
Investments in non-consolidated companies	14	495,241		478,348	
Other investments	18	7,195		3,380	
Derivative financial instruments	22	818		—	
Deferred tax assets	20	134,224		121,092	
Receivables, net	15	649,447		677,299	
Trade receivables, net	16	4,766	8,121,824	4,832	7,727,283
CURRENT ASSETS					
Receivables, net	15	309,750		362,173	
Derivative financial instruments	22	770		2,304	
Inventories, net	17	2,689,829		2,550,930	
Trade receivables, net	16	1,128,470		1,006,598	
Other investments	18	44,529		132,736	
Cash and cash equivalents	18	250,541	4,423,889	337,779	4,392,520
Non-current assets classified as held for sale			2,149		2,763
			4,426,038		4,395,283
Total Assets			12,547,862		12,122,566
EQUITY					
Capital and reserves attributable to the owners of the parent			6,393,255		5,010,424
Non-controlling interest			1,091,321		842,347
Total Equity			7,484,576		5,852,771
LIABILITIES					
NON-CURRENT LIABILITIES					
Provisions	19	643,950		768,517	
Deferred tax liabilities	20	474,431		513,357	
Other liabilities	21	414,541		373,046	
Trade payables		935		2,259	
Finance lease liabilities	23	65,798		69,005	
Borrowings	24	1,637,101	3,236,756	1,716,337	3,442,521
CURRENT LIABILITIES					
Current income tax liabilities		150,276		52,940	
Other liabilities	21	351,216		357,001	
Trade payables		904,171		897,732	
Derivative financial instruments	22	12,981		6,001	
Finance lease liabilities	23	8,030		8,030	
Borrowings	24	399,856	1,826,530	1,505,570	2,827,274

Total Liabilities	5,063,286	6,269,795
Total Equity and Liabilities	12,547,862	12,122,566

The accompanying notes are an integral part of these restated consolidated financial statements.

CONSOLIDATED STATEMENTS OF CHANGES IN EQUITY

TERNIUM S.A.
Consolidated Financial Statements as of December 31, 2018 and 2017 and for the years ended December 31, 2018, 2017 and 2016

All amounts thousands U.S. dollars

	ATTRIBUTABLE TO THE OWNERS OF THE PARENT [1]								
	Capital stock [2]	Treasury shares [2]	Initial public offering expenses	Reserves [3]	Capital stock issue discount [4]	Currency translation adjustment	Retained earnings	Total	Non-controll interest
BALANCE AT JANUARY 1, 2018	2,004,743	(150,000)	(23,295)	1,416,121	(2,324,866)	(2,403,664)	6,491,385	5,010,424	842,347
Impact of adopting IFRS 9 at January 1, 2018 (see Note 28)				450			(147)	303	204
Impact of adopting IFRS 29 at January 1, 2018 (see Note 4 (C))							421,502	421,502	268,824
Adjusted Balance at January 1, 2018	2,004,743	(150,000)	(23,295)	1,416,571	(2,324,866)	(2,403,664)	6,912,740	5,432,229	1,111,375
Profit for the year							1,506,647	1,506,647	155,485
Other comprehensive income (loss) for the year									
Currency translation adjustment						(298,813)		(298,813)	(151,168
Remeasurement of post employment benefit obligations				(29,418)				(29,418)	(3,366
Cash flow hedges and others, net of tax				(288)				(288)	83
Others				(1,164)				(1,164)	(148

Total comprehensive income (loss) for the year	—	—	—	(30,870)	—	(298,813)	1,506,647	1,176,964	886
Dividends paid in cash (5)							(215,938)	(215,938)	—
Dividends paid in cash to non-controlling interest (6)								—	(29,006
Inflation effect on dividends paid to non-controlling interest (Note 4 (CC))								—	8,066
Balance at December 31, 2018	2,004,743	(150,000)	(23,295)	1,385,701	(2,324,866)	(2,702,477)	8,203,449	6,393,255	1,091,321

(1) Shareholders’ equity determined in accordance with accounting principles generally accepted in Luxembourg is disclosed in Note 25 (iii).
(2) The Company has an authorized share capital of a single class of 3.5 billion shares having a nominal value of $1.00 per share. As of December 31, 2018, there were 2,004,743,442 shares issued. All issued shares are fully paid. Also, as of December 31, 2018, the Company held 41,666,666 shares as treasury shares.
(3) Include mainly legal reserve under Luxembourg law for $200.5 million, undistributable reserves under Luxembourg law for $1.4 billion, hedge accounting reserve, net of tax effect, for $0.5 million and reserves related to the acquisition of non-controlling interest in subsidiaries for $(88.5) million.
(4) Represents the difference between book value of non-monetary contributions received from shareholders under Luxembourg GAAP and IFRS.

(5) Represents $0.11 per share ($1.10 per ADS). Related to the dividends distributed on May 2, 2018, and as 41,666,666 shares are held as treasury shares by Ternium, the dividends attributable to these treasury shares amounting to $4.6 million were included in equity as less dividend paid.
(6) Corresponds to the dividends paid by Ternium Argentina S.A..
Dividends may be paid by Ternium to the extent distributable retained earnings calculated in accordance with Luxembourg law and regulations exist. Therefore, retained earnings included in these consolidated financial statements may not be wholly distributable. See Note 25 (iii).
The accompanying notes are an integral part of these consolidated financial statements.

TERNIUM S.A.
Consolidated Financial Statements as of December 31, 2018 and 2017 and for the years ended December 31, 2018, 2017 and 2016

CONSOLIDATED STATEMENTS OF CHANGES IN EQUITY

All amounts in thousands U.S. dollars

	ATTRIBUTABLE TO THE OWNERS OF THE PARENT [1]								
	Capital stock [2]	Treasury shares [2]	Initial public offering expenses	Reserves[3]	Capital stock issue discount [4]	Currency translation adjustment	Retained earnings	Total	Non-contro interest
BALANCE AT JANUARY 1, 2017	2,004,743	(150,000)	(23,295)	1,420,171	(2,324,866)	(2,336,929)	5,801,474	4,391,298	775,295
Profit for the year							886,219	886,219	136,708
Other comprehensive income (loss) for the year									
Currency translation adjustment						(66,735)		(66,735)	(37,658
Remeasurement of post employment benefit obligations				(4,642)				(4,642)	(1,556
Cash flow hedges and others, net of tax				504				504	124
Others				88				88	7
Total comprehensive income (loss) for the year	—	—	—	(4,050)	—	(66,735)	886,219	815,434	97,625
Dividends paid in cash [5]							(196,308)	(196,308)	—
Dividends paid in cash to non-controlling interest [6]								—	(30,573
Balance at December 31, 2017	2,004,743	(150,000)	(23,295)	1,416,121	(2,324,866)	(2,403,664)	6,491,385	5,010,424	842,347

(1) Shareholders' equity is determined in accordance with accounting principles generally accepted in Luxembourg.
(2) The Company has an authorized share capital of a single class of 3.5 billion shares having a nominal value of $1.00 per share. As of December 31, 2017, there were 2,004,743,442 shares issued. All issued shares are fully paid. Also, as of December 31, 2017, the Company held 41,666,666 shares as treasury shares.
(3) Include mainly legal reserve under Luxembourg law for $200.5 million, undistributable reserves under Luxembourg law for $1.4 billion, hedge accounting reserve, net of tax effect, for $0.6 million and reserves related to the acquisition of non-controlling interest in subsidiaries for $(88.5) million.
(4)Represents the difference between book value of non-monetary contributions received from shareholders under Luxembourg GAAP and IFRS.

(5) Represents $0.10 per share ($1.00 per ADS). Related to the dividends distributed on May 3, 2017, and as 41,666,666 shares are held as treasury shares by Ternium, the dividends attributable to these treasury shares amounting to $4.2 million were included in equity as less dividend paid.
(6) Corresponds to the dividends paid by Ternium Argentina S.A.
Dividends may be paid by Ternium to the extent distributable retained earnings calculated in accordance with Luxembourg law and regulations exist. Therefore, retained earnings included in these consolidated financial statements may not be wholly distributable. See Note 25 (iii).
The accompanying notes are an integral part of these consolidated financial statements.

TERNIUM S.A.

CONSOLIDATED STATEMENTS OF CHANGES IN EQUITY

Consolidated Financial Statements as of December 31, 2018 and 2017 and for the years ended December 31, 2018, 2017 and 2016

All amounts in thousands U.S. dollars

	ATTRIBUTABLE TO THE OWNERS OF THE PARENT [1]								
	Capital stock[2]	Treasury shares [2]	Initial public offering expenses	Reserves [3]	Capital stock issue discount [4]	Currency translation adjustment	Retained Earnings	Total	Non-controll interest
BALANCE AT JANUARY 1, 2016	2,004,743	(150,000)	(23,295)	1,444,394	(2,324,866)	(2,300,335)	5,382,507	4,033,148	769,849
Profit for the year							595,644	595,644	111,285
Other comprehensive income (loss) for the year									
Currency translation adjustment						(36,594)		(36,594)	(51,213
Remeasurement of post employment benefit obligations				(25,749)				(25,749)	(2,232
Cash flow hedges and others, net of tax				229				229	220
Others				1,297				1,297	(1,785
Total comprehensive income (loss) for the year	—	—	—	(24,223)	—	(36,594)	595,644	534,827	56,275
Dividends paid in cash [5]							(176,677)	(176,677)	—
Dividends paid in cash to non-controlling interest [6]								—	(50,829
Balance at December 31, 2016	2,004,743	(150,000)	(23,295)	1,420,171	(2,324,866)	(2,336,929)	5,801,474	4,391,298	775,295

(1) Shareholders' equity is determined in accordance with accounting principles generally accepted in Luxembourg.
(2) The Company has an authorized share capital of a single class of 3.5 billion shares having a nominal value of $1.00 per share. As of December 31, 2016, there were 2,004,743,442 shares issued. All issued shares are fully paid. Also, as of December 31, 2016, the Company held 41,666,666 shares as treasury shares.
(3) Include mainly legal reserve under Luxembourg law for $200.5 million, undistributable reserves under Luxembourg law for $1.4 billion, hedge accounting reserve, net of tax effect, for $0.1 million and reserves related to the acquisition of non-controlling interest in subsidiaries for $(88.5) million.
(4) Represents the difference between book value of non-monetary contributions received from shareholders under Luxembourg GAAP and IFRS.

(5) Represents $0.090 per share ($0.90 per ADS). Related to the dividends distributed on May 4, 2016, and as 41,666,666 shares are held as treasury shares by Ternium, the dividends attributable to these treasury shares amounting to $3.7 million were included in equity as less dividend paid.
(6) Corresponds to the dividends paid by Ternium Argentina S.A.
Dividends may be paid by Ternium to the extent distributable retained earnings calculated in accordance with Luxembourg law and regulations exist. Therefore, retained earnings included in these consolidated financial statements may not be wholly distributable. See Note 25 (iii).
The accompanying notes are an integral part of these consolidated financial statements.

	TERNIUM S.A.
CONSOLIDATED STATEMENTS OF CASH FLOWS	Consolidated Financial Statements as of December 31, 2018 and 2017 and for the years ended December 31, 2018, 2017 and 2016

All amounts in thousands U.S. dollars

YEAR ENDED DECEMBER 31,	NOTES	2018	2017	2016
CASH FLOWS FROM OPERATING ACTIVITIES				
Profit for the year		1,662,132	1,022,927	706,929
Adjustments for:				
Depreciation and amortization	12 & 13	589,299	474,299	406,890
Income tax accruals less payments	27 (b)	(154,366)	(273,443)	182,332
Equity in earnings of non-consolidated companies	14	(102,772)	(68,115)	(14,624)
Interest accruals less payments	27 (b)	(13,014)	19,484	12,699
Changes in provisions	19	(7,659)	2,783	1,678
Changes in working capital [(1)]	27 (b)	(228,577)	(864,970)	(162,373)
Net foreign exchange results and others		(5,778)	70,894	(33,936)
Net cash provided by operating activities		1,739,265	383,859	1,099,595
CASH FLOWS FROM INVESTING ACTIVITIES				
Capital expenditures	12 & 13	(520,250)	(409,402)	(435,460)
Loans to non-consolidated companies	14	(24,480)	(23,904)	(92,496)
Decrease in other investments	18	86,857	14,986	86,340
Proceeds from the sale of property, plant and equipment		861	1,124	1,212
Dividends received from non-consolidated companies		—	65	183
Acquisition of business				
Purchase consideration	3	—	(1,890,989)	—
Cash acquired	3	—	278,162	—
Investment in non-consolidated companies	14	—	—	(114,449)
Net cash used in investing activities		(457,012)	(2,029,958)	(554,670)
CASH FLOWS FROM FINANCING ACTIVITIES				
Dividends paid in cash to company's shareholders		(215,938)	(196,308)	(176,677)
Dividends paid in cash to non-controlling interests		(20,940)	(30,573)	(50,829)
Finance Lease payments		(7,565)	(4,157)	—
Proceeds from borrowings		1,188,731	3,239,121	910,577
Repayments of borrowings		(2,266,560)	(1,205,827)	(1,191,770)
Net cash provided by (used in) financing activities		(1,322,272)	1,802,256	(508,699)
(Decrease) Increase in cash and cash equivalents		(40,019)	156,157	36,226
MOVEMENT IN CASH AND CASH EQUIVALENTS				
At January 1,		337,779	183,463	151,491
Effect of exchange rate changes and inflation adjustment	4 (cc)	(47,219)	(1,841)	(4,254)
(Decrease) Increase in cash and cash equivalents		(40,019)	156,157	36,226
Cash and cash equivalents at December 31, [(2)]		250,541	337,779	183,463
Non-cash transactions:				
Acquisition of PP&E under lease contract agreements		—	77,035	—

(1) The working capital is impacted by non-cash movement of $(216.6) million as of December 31, 2018 ($(70.0) million and $(73.8) million as of December 31, 2017 and 2016, respectively) due to the variations in the exchange rates used by subsidiaries with functional currencies different from the $.

(2) It includes restricted cash of $2,216, $50 and $83 as of December 31, 2018, 2017 and 2016, respectively. In addition, the Company had other investments with a maturity of more than three months for $44,521, $135,864 and $150,851 as of December 31, 2018, 2017 and 2016,
respectively.
The accompanying notes are an integral part of these consolidated financial statements.

TERNIUM S.A.
Consolidated Financial Statements as of December 31, 2018 and 2017 and for the years ended December 31, 2018, 2017 and 2016

INDEX TO THE NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

1. GENERAL INFORMATION

Ternium S.A. (the "Company" or "Ternium"), was incorporated on December 22, 2003 to hold investments in flat and long steel manufacturing and distributing companies. The Company has an authorized share capital of a single class of 3.5 billion shares having a nominal value of $1.00 per share. As of December 31, 2018, there were 2,004,743,442 shares issued. All issued shares are fully paid.

Ternium's American Depositary Shares ("ADSs") trade on the New York Stock Exchange under the symbol TX.

The Company was initially established as a public limited liability company (société anonyme) under Luxembourg's 1929 holding company regime. Until termination of such regime on December 31, 2010, holding companies incorporated under the 1929 regime (including the Company) were exempt from Luxembourg corporate and withholding tax over dividends distributed to shareholders.

On January 1, 2011, the Company became an ordinary public limited liability company (société anonyme) and, effective as from that date, the Company is subject to all applicable Luxembourg taxes (including, among others, corporate income tax on its worldwide income) and its dividend distributions will generally be subject to Luxembourg withholding tax. However, dividends received by the Company from subsidiaries in high income tax jurisdictions, as defined under Luxembourg law, will continue to be exempt from corporate income tax in Luxembourg under Luxembourg's participation exemption.

As part of the Company's corporate reorganization in connection with the termination of Luxembourg's 1929 holding company regime, on December 6, 2010, the Company contributed its equity holdings in all its subsidiaries and all its financial assets to its Luxembourg wholly-owned subsidiary Ternium Investments S.à r.l., or Ternium Investments, in exchange for newly issued corporate units of Ternium Investments. As the assets contributed were recorded at their historical carrying amount in accordance with Luxembourg GAAP, the Company's December 2010 contribution of such assets to

Ternium Investments resulted in a non-taxable revaluation of the accounting value of the Company's assets under Luxembourg GAAP. The amount of the December 2010 revaluation was equal to the difference between the historical carrying amounts of the assets contributed and the value at which such assets were contributed and amounted to $4.0 billion. However, for the purpose of these consolidated financial statements, the assets contributed by Ternium to its wholly-owned subsidiary Ternium Investments were recorded based on their historical carrying amounts in accordance with IFRS, with no impact on the financial statements.

Following the completion of the corporate reorganization, and upon its conversion into an ordinary Luxembourg holding company, the Company voluntarily recorded a special reserve exclusively for tax-basis purposes. As of December 31, 2018 and 2017, this special tax reserve amounted to $6.7 billion and $6.9 billion, respectively. The Company expects that, as a result of its corporate reorganization, its current overall tax burden will not increase, as all or substantially all of its dividend income will come from high income tax jurisdictions. In addition, the Company expects that dividend distributions for the foreseeable future will be imputed to the special reserve and therefore should be exempt from Luxembourg withholding tax under current Luxembourg law.

2. BASIS OF PRESENTATION

A. BASIS OF PRESENTATION

These consolidated financial statements have been prepared in accordance with IFRS (International Financial Reporting Standards) issued and effective or issued and early adopted as at the time of preparing these statements (February 2019), as issued by the International Accounting Standards Board and in conformity with International Financial Reporting Standards as adopted by the European Union (EU). These consolidated financial statements are presented in thousands of United States dollars ($), except otherwise indicated.

These Consolidated financial statements fairly present the consolidated equity and consolidated financial situation of Ternium as of December 31, 2018, and the consolidated results of its operations, the Changes

78. Ternium

TERNIUM S.A.
Notes to the Consolidated Financial Statements (contd.)

in the Consolidated Statement of Comprehensive Income, the Changes in Consolidated Net Equity and the Consolidated Cash Flows of Ternium for the year then ended.

Elimination of all material intercompany transactions and balances between the Company and their respective subsidiaries has been made in consolidation.

These consolidated financial statements have been prepared under the historical cost convention, as modified by the revaluation of available-for-sale financial assets, and financial assets and financial liabilities (including derivative instruments) at fair value through profit or loss.

Certain comparative amounts have been reclassified to conform to changes in presentation in the current year. These reclassifications do not have a material effect on the Company's consolidated financial statements.

These consolidated financial statements have been approved for issue by the Board of Directors on February 19, 2019.

Detailed below are the companies whose financial statements have been consolidated and accounted for interest in these consolidated financial statements.

COMPANY	COUNTRY OF ORGANIZATION	MAIN ACTIVITY	PERCENTAGE OF OWNERSHIP AT DECEMBER 31,		
			2018	2017	2016
Ternium S.A.	Luxembourg	Holding	100.00%	100.00%	100.00%
Ternium Investments S.à.r.l.	Luxembourg	Holding	100.00%	100.00%	100.00%
Ternium Solutions A.G. (1)	Switzerland	Services	100.00%	100.00%	100.00%
Ternium Participaçoes S.A. (1)	Brazil	Holding	100.00%	100.00%	100.00%
Ternium Investments Switzerland AG (1)	Switzerland	Holding	100.00%	100.00%	100.00%
Ternium Internacional España S.L.U. (1)	Spain	Marketing of steel products	100.00%	100.00%	100.00%
Ternium USA Inc. (1)	USA	Manufacturing and selling of steel products	100.00%	100.00%	100.00%
Ternium Argentina S.A. (2)	Argentina	Manufacturing and selling of steel products	60.94%	60.94%	60.94%
Impeco S.A. (3)	Argentina	Manufacturing of pipe products	60.97%	60.97%	60.97%
Prosid Investments S.A. (4)	Uruguay	Holding	60.94%	60.94%	60.94%
Ternium Mexico S.A. de C.V. (5)	Mexico	Manufacturing and selling of steel products	88.78%	88.78%	88.78%
Hylsa S.A. de C.V. (6)	Mexico	Manufacturing and selling of steel products	88.78%	88.78%	88.78%
Las Encinas S.A. de C.V. (6)	Mexico	Exploration, exploitation and pelletizing of iron ore	88.78%	88.78%	88.78%
	Mexico	Scrap services company	88.78%	88.78%	88.78%

Ferropak Comercial S.A. de C.V. (6)					
Transamerica E. & I. Trading Corp. (6)	USA	Scrap services company	88.78%	88.78%	88.78%
Técnica Industrial S.A. de C.V. (6)	Mexico	Services	88.78%	88.78%	88.78%
Galvacer Chile SA (6)	Chile	Distributing company	88.78%	88.78%	88.78%
Imsamex Ecuador, S.A. (6)	Ecuador	Distributing company	88.78%	88.78%	88.78%
Ternium Gas México S.A. de C.V. (7)	Mexico	Energy services company	88.78%	88.78%	88.78%
Consorcio Minero Benito Juarez Peña Colorada S.A.de C.V. (8)	Mexico	Exploration, exploitation and pelletizing of iron ore	44.39%	44.39%	44.39%
Peña Colorada Servicios S.A. de C.V. (8)	Mexico	Services	44.39%	44.39%	44.39%
Exiros B.V. (8)	Netherlands	Procurement and trading services	50.00%	50.00%	50.00%
Servicios Integrales Nova de Monterrey S.A. de C.V. (9)	Mexico	Medical and Social Services	66.14%	66.14%	66.14%
Ternium Internacional Nicaragua S.A.	Nicaragua	Manufacturing and selling of steel products	99.38%	99.38%	99.38%
Ternium Internacional Honduras S.A. de C.V.	Honduras	Manufacturing and selling of steel products	99.18%	99.18%	99.18%
Ternium Internacional El Salvador S.A. de C.V.	El Salvador	Manufacturing and selling of steel products	99.92%	99.92%	99.92%

COMPANY	COUNTRY OF ORGANIZATION	MAIN ACTIVITY	PERCENTAGE OF OWNERSHIP AT DECEMBER 31,		
			2018	2017	2016
Ternium Internacional Costa Rica S.A.	Costa Rica	Manufacturing and selling of steel products	99.98%	99.98%	99.98%
Ternium Internacional Guatemala S.A. (10)	Guatemala	Selling of steel products	99.98%	99.98%	99.98%
Ternium Colombia S.A.S. (formerly Ferrasa S.A.S.) (10)	Colombia	Manufacturing and selling of steel products	100.00%	100.00%	100.00%
Ternium del Cauca S.A.S. (formerly Perfilamos del Cauca S.A.S.) (10)	Colombia	Manufacturing and selling of steel products	100.00%	100.00%	100.00%
Ternium Siderúrgica de Caldas S.A.S. (formerly Siderúrgica de Caldas S.A.S.) (10)	Colombia	Manufacturing and selling of steel products	100.00%	100.00%	100.00%
Tenigal S. de R.L. de C.V. (11)	Mexico	Manufacturing and selling of steel products	51.00%	51.00%	51.00%
Ternium Internacional S.A. (12)	Uruguay	Holding and marketing of steel products	100.00%	100.00%	100.00%
Ternium Treasury Services S.A. (12)	Uruguay	Financial Services	100.00%	100.00%	100.00%
Ternium Internationaal B.V. (13)	Netherlands	Marketing of steel products	100.00%	100.00%	100.00%
Ternium International Inc. (13)	Panama	Marketing of steel products	100.00%	100.00%	100.00%
Ternium Procurement S.A. (14)	Uruguay	Procurement services	100.00%	100.00%	100.00%
Technology & Engineering Services S.A. (14)	Uruguay	Engineering and other services	100.00%	100.00%	100.00%
Ternium International USA Corporation (15)	USA	Marketing of steel products	100.00%	100.00%	100.00%
Ternium Ingeniería y Servicios de México S.A. de C.V. (16)	Mexico	Engineering and other services	99.89%	99.89%	99.89%
Soluciones Integrales de Gestión S.A. (17)	Argentina	Other services	100.00%	100.00%	100.00%
Ternium Staal B.V. (18)	Netherlands	Holding and marketing of steel products	100.00%	100.00%	—
Ternium Brasil Ltda. (18)	Brazil	Manufacturing and selling of steel products	100.00%	100.00%	—
Ternium del Atlántico S.A.S (19)	Colombia	Manufacturing and selling of steel products	100.00%	100.00%	—
Ternium Solutions S.A. (formerly Tericer Trading S.A.) (20)	Uruguay	Other services	100.00%	—	—
Acedor, S.A. de C.V. (21)	Mexico	Holding	—	88.78%	88.78%
Ecosteel Gestao de Efuentes Industriais S.A. (22)	Brazil	Other services	—	100.00%	—
Galvatubing Inc (23)	USA	Manufacturing and selling of pipe Products	—	88.78%	88.78%
Galvamet America Corp (24)	USA	Manufacturing and selling of insulated panel products	—	88.78%	88.78%

Ternium Internacional de Colombia S.A.S. (25)	Colombia	Marketing of steel products	—	100.00%	100.00%
Ecosteel Gestao de Águas Industriais S.A. (26)	Brazil	Other services	—	100.00%	—
Galvacer America Inc (27)	USA	Distributing company	—	—	88.78%

(1) Indirectly through Ternium Investments S.à.r.l. Total voting rights held: 100.00%.
(2) During the fourth quarter of 2017, Siderar S.A.I.C. changed its business name to Ternium Argentina S.A. Indirectly through Ternium Internacional España S.L.U. Total voting rights held: 60.94%.
(3) Since the fourth quarter of 2017, indirectly through Ternium Argentina S.A. and Soluciones Integrales de Gestión S.A. Total voting rights held 100.00%. Before that, indirectly through Ternium Argentina S.A. and Ternium Internacional S.A.
(4) Since the fourth quarter of 2017, indirectly through Ternium Argentina S.A. and Ternium Procurement S.A. Total voting rights held 100.00%. Before that, indirectly through Ternium Argentina S.A. and Ternium Internacional S.A.
(5) Since the fourth quarter of 2017, indirectly through Ternium Argentina S.A. and Ternium Internacional España S.L.U. Total voting rights held 100.00%. Before that, indirectly through Ternium Argentina S.A., Ternium Internacional S.A. and Ternium Internacional España S.L.U.
(6) Indirectly through Ternium Mexico S.A. de C.V. Total voting rights held: 100.00%.
(7) Indirectly through Ternium Mexico S.A. de C.V. and Tenigal S. de R.L. de C.V. Total voting rights held: 100.00%.
(8) Total voting rights held: 50.00%.
(9) Indirectly through Ternium Mexico S.A. de C.V. Total voting rights held: 74.50%.
(10) Indirectly through Ternium Internacional España S.L.U.. Total voting rights held: 100.00%.
(11) Indirectly through Ternium Internacional España S.L.U.. Total voting rights held: 51.00%.
(12) Indirectly through Ternium Investments Switzerland AG. Total voting rights held: 100.00%.
(13) Since the third quarter of 2017, indirectly through Ternium Investments S.à r.l. Total voting rights held: 100.00%. Before that, indirectly through Ternium Investments Switzerland AG. (14) Since the third quarter of 2017, indirectly through Ternium Internacional España S.L.U. Total voting rights held: 100.00%. Before that, indirectly through Ternium Investments Switzerland AG.

(15) Since the fourth quarter of 2017, indirectly through Ternium Investments S.à r.l. Total voting rights held: 100.00%. Before that, indirectly through Ternium Internacional S.A.
(16) Indirectly through Technology & Engineering Services S.A. and Ternium México S.A. de C.V. Total voting rights held 100.00%.
(17) Since the third quarter of 2017, indirectly through Ternium Investments S.à r.l. and Ternium Internacional España S.L.U. Total voting rights held 100.00%. Before that, indirectly through Ternium Investments S.à r.l. and Technology and Engineering Services S.A.
(18) Indirectly through Ternium Investments S.à r.l. Total voting rights held: 100.00%.
(19) Indirectly through Ternium Internacional España S.L.U.. Total voting rights held: 100.00%.
(20) Indirectly through Ternium Investments S.à.r.l. Total voting rights held: 100.00%.
(21) Merged with Ternium México as of December 31, 2018.
(22) This company was dissolved as of May 4, 2018.
(23) This company was dissolved as of July 19, 2018.
(24) On August 3, 2018, the shareholders gave its consent to proceed with the liquidation and dissolution of this subsidiary.
(25) This company was dissolved as of October 3, 2018.
(26) This company was dissolved as of December 3, 2018.
(27)This company was dissolved as of December 11, 2017.

80. Ternium

TERNIUM S.A.
Notes to the Consolidated Financial Statements (contd.)

The most important non-controlling interest is related to the investment in Ternium Argentina S.A., which is a company listed in the Buenos Aires Stock Exchange. Ternium Argentina stated in its annual accounts as of and for the year ended December 31, 2018, that revenues amounted to $1,959 million (2017: $2,301 million), net profit from continuing operations to $254 million (2017: $337 million), total assets to $3,184 million (2017: $2,820 million), total liabilities to $606 million (2017: $874 million) and shareholder's equity to $2,578 million (2017: $1,945 million). All the information related to this investment could be found in the Buenos Aires Stock Exchange webpage.

3. ACQUISITION OF BUSINESS
CSA Siderúrgica do Atlântico Ltda. (now Ternium Brasil Ltda.) and thyssenkrupp Slab International B.V. (now Ternium Staal B.V.)

A. THE ACQUISITION
On September 7, 2017, Ternium completed the acquisition from thyssenkrupp AG (tkAG) of a 100% ownership interest in thyssenkrupp Slab International B.V. (tkSI) and its wholly-owned subsidiary CSA Siderúrgica do Atlântico Ltda. (CSA), a steel slab producer with a steelmaking facility located in the state of Rio de Janeiro, Brazil, and having an annual production capacity of 5 million tons of high-end steel slabs, a deep-water harbor and a 490 MW combined cycle power plant. The acquisition was expected to substantially increase Ternium's steelmaking capacity and strengthen its business in strategic industrial sectors across Latin America.

As part of the transaction, tkAG assigned to Ternium a slab commitment agreement providing for an arrangement relating to the purchase of CSA-manufactured carbon steel slabs under the terms of a slab frame supply agreement and related annual slab off-take agreements between tkSI and the entity that acquired thyssenkrupp's former Calvert re-rolling facility in Alabama, United States of America. Such slab commitment agreement provided for a commitment by such entity to purchase from tkSI approximately 2.0 million tons of CSA-manufactured carbon steel slabs per year until September 30, 2019, at the price resulting from the pricing formula set forth therein. This slab commitment agreement was amended on December 20, 2017, spreading deliveries of

the remaining slab volumes committed under such agreement through December 2020.

The purchase price paid by Ternium in the acquisition totaled approximately $1,891 million.

Ternium began consolidating the balance sheets and results of operations of tkSI and CSA as from September 7, 2017, and CSA changed its name to Ternium Brasil Ltda. and tkSI was renamed Ternium Staal B.V..

B. FAIR VALUE OF NET ASSETS ACQUIRED
The application of the purchase method required certain estimates and assumptions especially concerning the determination of the fair values of the acquired intangible assets and property, plant and equipment as well as the liabilities assumed at the date of the acquisition. The fair values determined at the acquisition date were based mainly on discounted cash flows and other valuation techniques.

The allocation of the fair values determined for the assets and liabilities arising from the acquisition was as follows:

	$
Property, plant and equipment and Intangible assets	1,573,946
Inventories	400,047
Cash and cash equivalents	278,162

Trade receivables	63,710
Other receivables	705,058
Deferred tax assets	13,686
Provisions	(799,938)
Trade payables	(219,604)
Other assets and liabilities, net	(124,078)
Net assets acquired	1,890,989

According to this purchase price allocation, no goodwill was recorded.

Ternium entered into several derivative contracts to partially hedge the currency volatility risk associated with the Euro-denominated transaction price. As of the date of the closing of the acquisition, the fair value of those contracts amounted to $75.9 million. Such value was deducted from the purchase consideration.

The purchase price allocation disclosed above was prepared with the assistance of a third-party expert. As of December 31, 2018, no adjustment has been recorded to the assets and liabilities assumed in comparison to the amounts registered as of December 31, 2017.

C. MAIN CONTINGENCIES ASSOCIATED WITH THE ACQUIRED BUSINESS
Contrary to the recognition principles in IAS 37 Provisions, Contingent Liabilities and Contingent Assets, IFRS 3 Business Combinations requires an acquirer of a business to recognize contingent liabilities assumed in a business acquisition at the acquisition date even if it is not probable that an outflow of resources will be required to settle the obligation.

The main contingencies recognized in the Company's consolidated financial statements pursuant to IFRS 3 Business Combinations in connection with the acquisition of tkSI and CSA include the following:

i. Fishermen associations' claims
Civil contingencies include lawsuits brought by a number of fishermen associations on behalf of their associates, alleging that the dredge of Ternium Brasil's deep-water port has had a negative impact on fish farming and exploitation activities in the Sepetiba Bay area in Rio de Janeiro and that, as a result, fishermen in that area had suffered damages. A provision in the amount of $24.5 million was recorded at the acquisition date in connection with this matter ($19.7 million as of December 31, 2018).

ii. Tax assessments relating to the use of certain ICMS tax credits
The Imposto Sobre Operações Relativas à Circulação de Mercadorias e Serviços, or ICMS, is a Brazilian value-added tax on the services (inter-states) and the transfer of goods in Brazil. Payment of ICMS generates tax credits that, subject to applicable law, rules and regulations, may be either used to offset ICMS payment obligations generated in connection with domestic sales of products and services, or sold and transferred to third parties.
The Rio de Janeiro State Treasury Office is challenging the use by Ternium Brasil of ICMS tax credits generated in connection with purchases of refractory materials in the period from December 2010 through December 2016, and intends to assess taxes and impose fines on Ternium Brasil on the argument that such materials may not be qualified as raw materials or intermediary products but as

goods for consumption and, accordingly, ICMS tax credits generated in connection with their purchase are not available and may not be used to offset ICMS payment obligations generated in connection with Ternium Brasil's domestic sales of carbon steel slabs. Ternium Brasil has appealed against the Rio de Janeiro State Treasury Office tax assessments and fines. A provision in the amount of $57.7 million was recorded as of the acquisition date in connection with this matter ($46.9 million as of December 31, 2018).

iii. ICMS deferral tax benefit - Unconstitutionality
Through State Law No. 4,529, of March 31, 2005, the State of Rio de Janeiro granted Ternium Brasil a tax incentive consisting of a deferment of ICMS payable by Ternium Brasil in connection with the construction and operation of the company's Rio de Janeiro steelmaking complex. The incentive applies in respect of the acquisition of fixed assets and certain raw materials (i.e. iron ore, pellets, alloys, coke, coal and scrap) and significantly reduces input ICMS credit accumulation by Ternium Brasil. The tax incentive was granted for a period of 20 years from the commencement of the construction works for Ternium Brasil's Rio de Janeiro steel complex.

In 2012, a Brazilian political party filed a direct action of unconstitutionality against the above-mentioned State Law before the Brazilian Federal Supreme Court, predicated on the argument that, since the tax incentive granted pursuant to such State Law had not been approved by Brazil's National Council of Fiscal Policy (Conselho Nacional de Política Fazendária, or CONFAZ), such State Law should be declared unconstitutional.

In August 2017, the Brazilian Congress enacted Supplementary Law No. 160/2017, instituting a mechanism through which the States may confirm any ICMS incentives they had granted in prior years without CONFAZ approval and, in furtherance of such Supplementary Law, in December 2017 the States adopted ICMS Convention 190/2017, establishing the applicable rules and deadlines for so confirming such ICMS incentives. As per the terms of ICMS Convention 190/2017, all States are required to publish in their official gazettes, on or before March 29, 2018, a list of the ICMS incentives that are to be confirmed pursuant to

Supplementary Law No. 160. On March 6, 2018, the State of Rio de Janeiro published its list of ICMS incentives, including, among others, the ICMS benefit granted to Ternium Brasil. ICMS Convention 190/2017 also required that all relevant documents concerning such incentives be filed with CONFAZ, and the State of Rio de Janeiro satisfied such requirements as well. On July 27, 2018, the Governor of Rio de Janeiro issued Executive Order (Decreto) No. 46,78, pursuant to which the State of Rio de Janeiro reconfirmed, in accordance with ICMS Convention 190/2017, the ICMS tax benefits listed in its official gazette publication made pursuant to the Convention, including, among others, Ternium Brasil's ICMS tax benefits.

In October 2018, the State of Rio de Janeiro and the Federation of Industries of the State of Rio de Janeiro (Federação das Indústrias do Estado do Rio de Janeiro , or FIRJAN) filed petitions arguing that the action of unconstitutionality against the March 31, 2005 Rio de Janeiro State Law No. 4,529 could not be judged by the Federal Supreme Court since, following the revalidation of such law under Supplementary Law No.160/17 and the ICMS Convention 190/2017, such action of unconstitutionality had lost its purpose. Following the filing of such petitions, the Reporting Justice Minister in charge of the case summoned the plaintiff in such action of unconstitutionality, the Federal Attorney General's Office (Advocacia-Geral da União, or AGU) and the Chief of the Public Minister (Procuradoria-Geral da República, or PGR) to submit statements expressing their respective views on the arguments presented by the State of Rio de Janeiro and the FRIJAN with respect to the effect of Supplementary Law No.160/17 and the ICMS Convention 190/2017 on the pending action of unconstitutionality. In their respective statements, the plaintiff argued that Supplementary Law No.160/17 and the ICMS Convention 190/2017 do not affect the unconstitutionality of ICMS benefits granted through State Law No. 4,529, while the AGU stated that, in light of the additional legal support provided by Supplementary Law No.160/17 and the ICMS Convention 190/2017, a finding of unconstitutionality of State Law No. 4,529 would not be warranted. In turn, the PGR stated that a decision on the case should be postponed until the Federal Supreme Court completes its analysis of Supplementary Law No.160/17 and ICMS Convention 190/2017. As of the date of these consolidated

financial statements, the Federal Supreme Court has not yet ruled on the above-referred petitions filed by the State of Rio de Janeiro and FIRJAN.

The tax benefits accumulated under Ternium Brasil's ICMS incentive as of the acquisition date amounted to approximately $1,089 million. In accordance with the guidance in IFRS 3, the Company recorded as of the acquisition date a provision of $651.8 million (including estimated penalties and interest) in connection with this matter, together with an asset of $325.9 million arising from its right to recover part of the contingency amount from thyssenkrupp Veerhaven B.V. ($529.4 million and $264.7 million, respectively, as of December 31, 2018). The calculation of this contingency has been determined taking into consideration the probability of negative outcome for the Company, if any, on an estimated total risk of $1,630 million (including estimated penalties and interests).

D. ACQUISITION FINANCING

The acquisition was mainly financed through an unsecured 5-year syndicated facility in the principal amount of $1.5 billion granted to the Company's subsidiary, Ternium Investments S.àr.l., by a syndicate of banks.

The facility will be repaid in eight consecutive and equal semi-annual installments, commencing on March 5, 2019, and has been guaranteed by the Company's subsidiary, Ternium México, S.A. de C.V. The borrower and the guarantor are subject to certain covenants customary for transactions of this type, including limitations on liens and encumbrances, transactions with affiliates, consolidations and mergers and restrictions on investments. The guarantor is additionally subject to limitations on the sale of certain assets and compliance with a leverage ratio. There are no limitations to the payment of dividends applicable to the borrower or the guarantor, except, with respect to the borrower, upon an event of default under the facility. During 2018, the Company made prepayments of principal for $375 million. As of December 31, 2018, the outstanding value of this syndicated facility was $1.125 million and both the borrower and the guarantor were in compliance with all of its covenants.

4. ACCOUNTING POLICIES
The following is a summary of the principal accounting policies followed in the preparation of these Consolidated Financial Statements:

A. GROUP ACCOUNTING
1. Subsidiary companies and transactions with non- controlling interests

Subsidiaries are all entities over which the Company has control. The Company controls an entity when the Company 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 over the entity. Subsidiaries are fully consolidated from the date on which control is transferred to the Company. They are deconsolidated from the date that control ceases.

The Company uses the acquisition method of accounting to account for business combinations. The consideration transferred for the acquisition of a subsidiary is the fair values of the assets transferred, the liabilities incurred and the equity interests issued by the Company. The consideration transferred includes the fair value of any asset or liability resulting from a contingent consideration arrangement. Acquisition-related costs are expensed as incurred. Identifiable assets acquired and liabilities and contingent liabilities assumed in a business combination are measured initially at the fair values at the acquisition date. Indemnification assets are recognized at the same time that the Company recognizes the indemnified item and measures them on the same basis as the indemnified item, subject to the need for a valuation allowance for uncollectible amounts. The Company measures the value of a reacquired right recognized as an intangible asset on the basis of the remaining contractual term of the related contract regardless of whether market participants would consider potential contractual renewals in determining its fair value.

On an acquisition-by-acquisition basis, the Company recognizes any non-controlling interest in the acquiree at the non-controlling interest's proportionate share of the acquiree's net assets.

The excess of the consideration transferred, the amount of any non-controlling interest in the acquiree and the

acquisition-date fair value of any previous equity interest in the acquiree over the fair value of the Company's share of the identifiable net assets acquired is recorded as goodwill. If this is less than the fair value of the net assets of the subsidiary acquired in the case of a bargain purchase, the difference is recognized directly in the income statement.

The measurement period is the earlier of the date that the acquirer receives the information that it is looking for or cannot obtain the information and one year after the acquisition date. Where the accounting for a business combination is not complete by the end of the reporting period in which the business combination occurred provisional amounts are reported.

The Company treats transactions with non-controlling interests as transactions with equity owners of the Company. For purchases from non-controlling interests, the difference between any consideration paid and the relevant share acquired of the carrying value of net assets of the subsidiary is recorded in equity. Gains or losses on disposals to non-controlling interests are also recorded in equity.

When the Company ceases to have control or significant influence, any retained interest in the entity is remeasured to its fair value, with the change in carrying amount recognized in profit or loss. The fair value is the initial carrying amount for the purposes of subsequently accounting for the retained interest as an associate, joint venture or financial asset. In addition, any amounts previously recognized in other comprehensive income in respect of that entity are accounted for as if the group had directly disposed of the related assets or liabilities. This may mean that amounts previously recognized in other comprehensive income are reclassified to profit or loss.

Inter-company 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. However, the fact that the functional currency of some subsidiaries is their respective local currency, generates some financial gains (losses) arising from intercompany transactions, that are included in the consolidated income statement under Other financial expenses, net.

2. Investments in non-consolidated companies
Associated companies are those entities in which Ternium has significant influence, but which it does not control.

Joint arrangements are understood as combinations in which there are contractual agreements by virtue of which two or more companies hold an interest in companies that undertake operations or hold assets in such a way that any financial or operating decision is subject to the unanimous consent of the partners. A joint arrangement is classed as a joint operation if the parties hold rights to its assets and have obligations in respect of its liabilities or as a joint venture if the venturers hold rights only to the investee's net assets.

Investments in non-consolidated companies (associated companies and joint ventures) are accounted for using the equity method of accounting. Under this method, interests in joint ventures and associates are initially recognized in the consolidated statement of financial position at cost and adjusted thereafter to recognize the Company’s share of the post-acquisition profits or losses in the income statement, and its share of post-acquisition changes in reserves recognized in reserves and in other comprehensive income in the income statement.

Unrealized gains on transactions among the Company and its non-consolidated companies are eliminated to the extent of the Company’s interest in such non-consolidated companies; unrealized losses are also eliminated unless the transaction provides evidence of an impairment of the transferred asset. When the Company’s share of losses in a non-consolidated company equals or exceeds its interest in such non-consolidated company, the Company does not recognize further losses unless it has incurred obligations or made payments on behalf of such non-consolidated company.

The Company’s investment in associates and joint ventures includes notional goodwill identified on acquisition.

The Company determines at each reporting date whether there is any objective evidence that the investment is impaired. If this is the case, the group calculates the amount of impairment as the difference between the recoverable amount of the investment and its carrying value and recognizes the amount within "Equity on earnings (losses) of non-consolidated companies".

B. FOREIGN CURRENCY TRANSLATION
1. Functional and presentation currency
Items included in the financial statements of each of the Company's subsidiaries and associated companies are measured using the currency of the primary economic environment in which the entity operates (the "functional currency"). Except for the Argentine and the non-consolidated companies whose functional currencies are their local currencies, Ternium determined that the functional currency of its subsidiaries is the U.S. dollar. Although Ternium is located in Luxembourg, it operates in several countries with different currencies. The $ is the currency that best reflects the economic substance of the underlying events and circumstances relevant to Ternium as a whole.

2. Subsidiary companies
The results and financial position of all the group entities (none of which operates in a hyperinflationary economy) that have a functional currency different from the presentation currency, are translated into the presentation currency as follows:

(i) assets and liabilities are translated at the closing rate of each statement of financial position;

(ii) income and expenses for each income statement are translated at average exchange rates (unless this average is not a reasonable approximation of the cumulative effect of the rates prevailing on the transaction dates, in which case income and expenses are translated at the rate on the dates of the transactions); and

(iii) all resulting translation differences are recognized within other comprehensive income.
In the case of a sale or other disposition of any such subsidiary, any accumulated translation differences would be recognized in the income statement as part of the gain or loss on sale.

3. Transactions in currencies other than the functional currency
Transactions in currencies other than the functional currency are translated into the functional currency using the exchange rates prevailing at the date of the transactions or valuation where items are re-measured.

At the end of each reporting period: (i) monetary items denominated in currencies other than the functional currency are translated using the closing rates, (ii) non-monetary items that are measured in terms of historical cost in a currency other than the functional currency are translated using the exchange rates prevailing at the date of the transactions; and (iii) non-monetary items that are measured at fair value in a currency other than the functional currency are translated using the exchange rates prevailing at the date when the fair value was determined.

Foreign exchange gains and losses resulting from the settlement of such transactions and from the translation at year-end exchange rates of monetary assets and liabilities denominated in currencies other than the functional currency are recorded as gains and losses from foreign exchange and included in "Other financial income (expenses), net" in the consolidated income statement, except when deferred in equity as qualifying cash flow hedges and qualifying net investment hedges. Translation differences on non-monetary financial assets and liabilities such as equities held at fair value through profit or loss are recognized in profit or loss as part of the "fair value gain or loss," while translation differences on non-monetary financial assets such as equities classified as fair value through other comprehensive income are included in other gains/(losses).

C. FINANCIAL INSTRUMENTS
Non derivative financial instruments
Non derivative financial instruments comprise investments in equity and debt securities, trade and other receivables, cash and cash equivalents, loans and borrowings, and trade and other payables.

From January 1, 2018, the Company classifies its financial instruments in the following measurement categories:

- Amortized cost: instruments that are held for collection or repayment of contractual cash flows where

those cash flows represent solely payments of principal and interest are measured at amortized cost. Interest income and expenses from these financial instruments are included in finance income or expense using the effective interest rate method. Any gain or loss arising on derecognition is recognized directly in profit or loss and presented in finance income or expense, together with foreign exchange gains and losses. Impairment losses are presented as separate line items in the statement of profit or loss.

- Fair value through other comprehensive income (FVOCI): financial assets that are held for collection of contractual cash flows and for selling the financial assets, where the assets’ cash flows represent solely payments of principal and interest, are measured at FVOCI. Movements in the carrying amount are taken through OCI, except for the recognition of impairment gains or losses, interest revenue and foreign exchange gains and losses which are recognized in profit or loss. When the financial asset is derecognized, the cumulative gain or loss previously recognized in OCI is reclassified from equity to profit or loss and recognized in other gains/(losses). Interest income from these financial assets is included in finance income using the effective interest rate method. Foreign exchange gains and losses are presented in other gains/(losses) and impairment expenses are presented as separate line item in the statement of profit or loss.

- Fair value through profit or loss (FVPL): financial instruments that do not meet the criteria for amortized cost or FVOCI are measured at FVPL. A gain or loss on a debt investment that is subsequently measured at FVPL is recognized in profit or loss and presented net within other gains/(losses) in the period in which it arises.

The classification depends on the Company’s business model for managing the financial instruments and the contractual terms of the cash flows.

For financial instruments measured at fair value, gains and losses will either be recorded in profit or loss or OCI. For investments in equity instruments that are not held for trading, this will depend on whether the group has made an irrevocable election at the time of initial recognition to account for the equity investment at FVOCI.

At initial recognition, the Company measures a financial instrument at its fair value plus, in the case of a financial instrument not at FVPL, transaction costs that are directly attributable to the acquisition of the financial instrument. Transaction costs of financial instruments carried at FVPL are expensed in profit or loss. Subsequent measurement of debt instruments depends on the Company's business model for managing the asset and the cash flow characteristics of the asset.

Until December 31, 2017, Ternium non derivative financial instruments were classified into the following categories:

- Financial instruments at fair value through profit or loss: comprising mainly cash and cash equivalents and investments in debt securities held for trading;
- Held-to-maturity instruments: measured at amortized cost using the effective interest method less impairment losses. As of December 31, 2017, there were $6.1 million classified under this category;
- Loans and receivables: measured at amortized cost using the effective interest method less impairment losses;
- Available-for-sale ("AFS") financial assets: gains and losses arising from changes in fair value were recognized within other comprehensive income ("OCI") with the exception of impairment losses, interest calculated using the effective interest method and foreign exchange gains and losses on monetary assets, which were recognized directly in profit or loss. Where the investment was disposed of or was determined to be impaired, the cumulative gain or loss previously recognized in OCI was included in the income statement for the period. As of December 31, 2017, there were no AFS amounts classified under this category;
- Other financial liabilities: measured at amortized cost using the effective interest method.

The classification depended on the nature and purpose of the financial assets and was determined at the time of initial recognition.

Financial assets and liabilities were recognized and derecognized on the settlement date.

Financial assets were initially measured at fair value, net of transaction costs, except for those financial assets classified as financial assets at fair value through profit or loss.

Financial liabilities, including borrowings, were initially measured at fair value, net of transaction costs and subsequently measured at amortized cost using the effective interest method, with interest expense recognized on an effective yield basis.

Impairment of financial assets

From January 1, 2018, the Company assesses on a forward-looking basis the expected credit losses associated with its debt instruments carried at amortized cost and FVOCI. The impairment methodology applied depends on whether there has been a significant increase in credit risk.

For trade receivables, the Company applies the simplified approach permitted by IFRS 9, which requires expected lifetime losses to be recognized from initial recognition of the receivables, see Note 4 (I) for further details.

Until December 31, 2017, the Company assessed at the end of each reporting period whether there was objective evidence that a financial asset or group of financial assets was impaired. A financial asset or a group of financial assets was impaired and impairment losses were incurred only if there was objective evidence of impairment as a result of one or more events that occurred after the initial recognition of the asset (a "loss event") and that loss event (or events) had an impact on the estimated future cash flows of the financial asset or group of financial assets that could be reliably estimated. The Company first assessed whether objective evidence of impairment existed.

For loans and receivables category and for held-to-maturity investments, the amount of the loss was measured as the difference between the asset's carrying amount and the present value of estimated future cash flows (excluding future credit losses that have not been incurred) discounted at the financial asset's original effective interest rate. The carrying amount of the asset was reduced and the amount of the loss was recognized in the consolidated income statement.

If, in a subsequent period, the amount of the impairment loss decreased and the decrease could be related objectively to an event occurring after the impairment was recognized, the reversal of the previously recognized impairment loss was recognized in the consolidated income statement.

Derivative financial instruments
Information about accounting for derivative financial instruments and hedging activities is included in Note 29 "Financial Risk management" and Note 4 (y).

D. PROPERTY, PLANT AND EQUIPMENT
Land and buildings comprise mainly factories and offices. All property, plant and equipment are recognized at historical acquisition or construction cost less accumulated depreciation and accumulated impairment (if applicable), except for land, which is carried at acquisition cost less accumulated impairment (if applicable). There are no material residual values for property, plant and equipment items.

Major overhaul and rebuilding expenditures are recognized as a separate asset when future economic benefits are expected from the item, and the cost can be measured reliably.

Ordinary maintenance expenses on manufacturing properties are recorded as cost of products sold in the period in which they are incurred.

Where a tangible fixed asset comprises major components having different useful lives, these components are accounted for as separate items. Spare parts are included in property, plant and equipment.

Leases where the lessor retains a significant portion of the risks and rewards of ownership are classified as operating leases. Payments made under operating leases (net of any incentives received from the lessor) are charged to the income statement on a straight-line basis over the period of the lease.

Depreciation method is reviewed at each year end. Depreciation is calculated using the straight-line method to amortize the cost of each asset to its residual value over its estimated useful life as follows:

Land	No Depreciation
Buildings and improvements	10-50 years
Production equipment	5-40 years
Vehicles, furniture and fixtures and other equipment	5-20 years

Property, plant and equipment used in mining activities are depreciated over its useful life or over the remaining life of the mine if shorter and there is no alternative use possible.

The assets' useful lives are reviewed, and adjusted if appropriate, at each year end. The re-estimation of assets useful lives by the Company did not materially affect depreciation charges in 2018, 2017 and 2016.

Gains and losses on disposals are determined by comparing the proceeds with the corresponding carrying amounts and are included in the income statement.
If the carrying amount of an asset were greater than its estimated recoverable amount, it would be written down to its recoverable amount (see Note 4 (F) "Impairment").

Amortization charges are included in cost of sales, selling, general and administrative expenses.

E. INTANGIBLE ASSETS
1. Information system projects

Generally, costs associated with developing or maintaining computer software programs are recognized as an expense as incurred. However, costs directly related to the acquisition and implementation of information systems are recognized as intangible assets if they have a probable economic benefit exceeding the cost beyond one year and comply with the recognition criteria of IAS 38.

Information system projects recognized as assets are amortized using the straight-line method over their useful lives, not exceeding a period of 3 years. Amortization charges are included in cost of sales, selling, general and administrative expenses.

2. Mining assets
Mining assets include:
(a) Mining licenses acquired;
(b) Capitalized exploration and evaluation costs, reclassified from exploration and evaluation costs (see Note 4 (E) 3); and

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(c) Capitalized developmental stripping costs (see Note 4 (U)).

Mining licenses were recognized as separate intangible assets upon the acquisition of the investment in Mexico and comprise the right to exploit the mines and are recognized at its fair value at acquisition date less accumulated amortization.

These mining concessions were granted for a 50-year period; following the expiration of the initial concession term, the concessions are renewable for an additional 50-year term in accordance with, and subject to the procedures set forth in, applicable Mexican mining law.

Amortization charge is calculated by using the unit-of-production method, on the basis of actual mineral extracted in each period compared to the estimated mineral reserves, and is included in cost of sales. Any change in the estimation of reserves is accounted for prospectively. The resulting amortization rate for the years ended December 31, 2018, 2017 and 2016, is approximately 8%, 7% and 7% per year, respectively.

3. Exploration and evaluation costs
Exploration and evaluation activities involve the search for iron ore resources, the determination of technical feasibility and the assessment of commercial viability of an identified resource.

Exploration and evaluation costs are measured at cost. Costs directly associated with exploration and evaluation activities are capitalized as intangible assets until the determination of reserves is evaluated. The costs associated to the acquisition of machinery and equipment are recognized as property, plant and equipment. If it is determined that commercial discovery has been achieved, costs incurred are reclassified into Mining assets and amortization starts once production begins.

Exploration costs are tested for impairment when there are indicators that impairment exists. Indicators of impairment include, but are not limited to:

- Rights to explore in an area have expired or will expire in the near future without renewal;
- No further exploration and evaluation is planned or budgeted;
- A decision to discontinue exploration and evaluation in an area because of the absence of commercial reserves; and
- Sufficient data exists to indicate that the book value will not be fully recovered from future development and production.

When analyzing the existence of impairment indicators, the exploration and evaluation areas from the mining cash-generating units will be evaluated.

4. Goodwill
Goodwill represents the excess of the acquisition cost over the fair value of Ternium's participation in acquired companies' net assets at the acquisition date. Under IFRS 3, goodwill is considered to have an indefinite life and not amortized, but is subject to annual impairment testing.

Goodwill is allocated to Cash-generating units ("CGU") for the purpose of impairment testing. The allocation is made to those cash-generating units expected to benefit from the business combination which generated the goodwill being tested. The impairment losses on goodwill cannot be reversed.

As of December 31, 2018 and 2017, the carrying amount of goodwill allocated to the Mexico CGUs was $662.3 million, of which $619.8 million corresponds to steel operations and $42.5 million to mining operations.

5. Research and development

Research expenditures are recognized as expenses as incurred. Development costs are recorded as cost of sales in the income statement as incurred because they do not fulfill the criteria for capitalization. Research and development expenditures for the years ended December 31, 2018, 2017 and 2016 totaled $8.9 million, $9.8 million and $9.2 million, respectively.

6. Customer relationships acquired in a business combination

In accordance with IFRS 3 and IAS 38, Ternium has recognized the value of customer relationships separately from goodwill in connection with the acquisitions of Grupo Imsa and Ternium Colombia S.A.S. These customer relationships were amortized using the straight-line method over a useful life of approximately 10 years.

As of December 31, 2017, these assets were fully amortized.

In accordance with IFRS 3 and IAS 38, Ternium has recognized the value of customer relationships in connection with the acquisition of Ternium Staal B.V. The value of the slab commitment agreement by which Ternium Investments S.à r.l. is entitled to invoice, under certain conditions, the price difference between slabs and hot rolled coils will be amortized using the units of slabs sold method.

7. Trademarks acquired in a business combination
In accordance with IFRS 3 and IAS 38, Ternium has recognized the value of trademarks separately from goodwill in connection with the acquisitions of Grupo Imsa and Ternium Colombia S.A.S. As of December 31, 2017, these assets were fully amortized.

Trademarks are amortized using the straight-line method over a useful life of between 5 to 10 years.

F. IMPAIRMENT
Assets that have an indefinite useful life (including goodwill) are not subject to amortization and are tested annually for impairment or whenever events or changes in circumstances indicate that the carrying amount may not be recoverable. Assets that are subject to amortization and investments in affiliates are reviewed 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 cost to sell and the value in use.

To carry out these tests, assets are grouped at the lowest levels for which there are separately identifiable cash flows (each, a CGU). When evaluating long-lived assets for potential impairment, the Company estimates the recoverable amount based on the value in use of the corresponding CGU. The value in use of each CGU is determined on the basis of the present value of net future cash flows which will be generated by the assets tested.

Determining the present value of future cash flows involves highly sensitive estimates and assumptions

specific to the nature of each CGU's activities, including estimates and assumptions relating to amount and timing of projected future cash flows, expected changes in market prices, expected changes in the demand of Ternium products and services, selected discount rate and selected tax rate.

Ternium uses cash flow projections for the next five years based on past performance and expectations of market development; thereafter, it uses a perpetuity rate. Application of the discounted cash flow (DCF) method to determine the value in use of a CGU begins with a forecast of all expected future net cash flows. Variables considered in forecasts include the gross domestic product (GDP) growth rates of the country under study and their correlation with steel demand, level of steel prices and estimated raw material costs as observed in industry reports.

Cash flows are discounted at rates that reflect specific country and currency risks associated with the cash flow projections. The discount rates used are based on the weighted average cost of capital (WACC), which is considered to be a good indicator of cost of capital. As of December 31, 2018 the discount rate used to test goodwill allocated to the Steel and Mining Mexico CGUs for impairment was 11.68% (as of December 31, 2017, 11.49%).

As a result of the above factors, actual cash flows and values could vary significantly from the forecasted future cash flows and related values derived using discounting techniques. Based on the information currently available, however, Ternium believes that it is not reasonably possible that the variation would cause the carrying amount to exceed the recoverable amount of the CGUs.

Considering the economic situation in Argentina, the increase in the inflation rates, the devaluation of the Argentine peso and a weaker industrial environment, the Company decided to assess the recoverability of its investments in Argentina, resulting in no impairment charges to be recognized. As of December 31, 2018, the discount rate used to test the investment in Argentine subsidiaries for impairment was 13.5%.

During the years 2018, 2017 and 2016, no impairment provisions were recorded in connection with assets that have an indefinite useful life (including goodwill).

G. OTHER INVESTMENTS
Other investments consist primarily of investments in financial debt instruments and equity investments where the Company holds a minor equity interest and does not exert significant influence.

All purchases and sales of investments are recognized on the settlement date, which is not significantly different from the trade date, which is the date that Ternium commits to purchase or sell the investment.

Income from financial instruments at fair value through profit or loss is recognized in Other financial income (expenses), net in the consolidated income statement. The fair value of quoted investments is based on current bid prices. If the market for a financial investment is not active or the securities are not listed, the Company estimates the fair value by using standard valuation techniques. Dividends from investments in equity instruments are recognized in the income statement when the Company's right to receive payments is established.

Certain fixed income financial instruments purchased by the Company have been categorized as at fair value through other comprehensive income. The results of these financial investments are recognized in Finance Income in the Consolidated Income Statement using the effective interest method. Unrealized gains and losses other than impairment and foreign exchange results are recognized in Other comprehensive income. On maturity or disposal, net gain and losses previously deferred in Other comprehensive income are recognized in Finance Income in the Consolidated Income Statement.

H. INVENTORIES
Inventories are stated at the lower of cost (calculated using the first-in-first-out "FIFO" method) or net realizable value. The cost of finished goods and goods in process comprises raw materials, direct labor, depreciation, other direct costs and related production overhead costs. It excludes borrowing costs. Goods acquired in transit at year end are valued at supplier's invoice cost.

The cost of iron ore produced in our mines comprises all direct costs necessary to extract and convert stockpiled inventories into raw materials, including production stripping costs, depreciation of fixed assets related to the mining activity and amortization of mining assets for those mines under production.

The Company assesses the recoverability of its inventories considering their selling prices, if the inventories are damaged, or if they have become wholly or partially obsolete (see Note 4 (BB) (4)).

I. TRADE RECEIVABLES AND THE OTHER RECEIVABLES
Trade and other receivables are recognized initially at fair value, generally the original invoice amount. Since January 1, 2018, the Company applies the IFRS 9 simplified approach to measuring expected credit losses which uses a lifetime expected loss allowance for all trade receivables. To measure the expected credit losses, trade receivables are grouped based on shared credit risk characteristics and the days past due. The Company keeps an allowance for trade receivables, recorded in an asset account to offset the trade receivables in an amount estimated sufficient to cover the losses resulting from the impossibility for the debtors to cancel the amounts owed. This allowance for trade receivables is recorded with a charge to selling expenses.

J. CASH AND CASH EQUIVALENTS

Cash and cash equivalents and highly liquid short-term securities are carried at fair market value or at a historical cost which approximates fair market value.

For purposes of the cash flow statement, cash and cash equivalents comprise cash, bank current accounts and short-term highly liquid investments (original maturity of three months or less at date of acquisition) and overdrafts.

In the consolidated statement of financial position, bank overdrafts are included in borrowings within current liabilities.

K. NON CURRENT ASSETS (DISPOSAL GROUPS) CLASSIFIED AS HELD FOR SALE

Non-current assets (disposal groups) are classified as assets held for sale, complying with the recognition criteria of IFRS 5, and stated at the lower of carrying amount and fair value less cost to sell if their carrying amount is recovered principally through a sale transaction rather than through continuing use.

The carrying value of non-current assets classified as held for sale, at December 31, 2018 and 2017 totals $2.1 million and $2.8 million, respectively, which corresponds principally to land and other real estate items. Sale is expected to be completed within a one-year period.

L. BORROWINGS

Borrowings are recognized initially for an amount equal to the net proceeds received. In subsequent periods, borrowings are stated at amortized cost following the effective interest method.

M. FINANCE LEASES

Leases of property, plant and equipment where the Company, 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. The finance cost is charged to the profit or loss over the lease period so as to produce a constant periodic rate of interest on the remaining balance of the liability for each period. The property, plant and equipment acquired under finance leases is depreciated over the asset's useful life or over the shorter of the asset's useful life and the lease term if there is no reasonable certainty that the Company will obtain ownership at the end of the lease term.

N. INCOME TAXES – CURRENT AND DEFERRED

The current income tax charge is calculated on the basis of the tax laws in force in the countries in which Ternium and its subsidiaries operate. Management evaluates positions taken in tax returns with respect to situations in which applicable tax regulation could be subject to interpretation. A liability is recorded for tax benefits that were taken in the applicable tax return but have not been recognized for financial reporting.

Deferred income taxes are calculated using the liability method on temporary differences arising between the tax

bases of assets and liabilities and their carrying amounts in the financial statements. 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. The principal temporary differences arise on fixed assets, intangible assets, inventories valuation and provisions for pensions. Deferred tax assets and liabilities are measured at the tax rates that are expected to apply in the period when the asset is realized or the liability is settled, based on tax rates and tax laws that have been enacted or substantially enacted at year end. Under IFRS, deferred income tax assets (liabilities) are classified as non-current assets (liabilities).

Deferred tax assets are recognized to the extent it is probable that future taxable income will be available to offset temporary differences.

Deferred income tax is provided on temporary differences arising on investments in subsidiaries and associated companies, except where the timing of the reversal of the temporary difference is controlled by the Company and it is probable that the temporary difference will not reverse in the foreseeable future.

Deferred tax assets and liabilities are re-estimated if tax rates change. These amounts are charged or credited to the consolidated income statement or to the item Other comprehensive income for the year in the consolidated statement of comprehensive income, depending on the account to which the original amount was charged or credited.

O. EMPLOYEE LIABILITIES

1. Post-employment obligations

The Company has defined benefit and defined contribution plans. A defined benefit plan is a pension plan that defines an amount of pension benefit that an employee will receive on retirement, usually dependent on one or more factors such as age, years of service and compensation.

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

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of the reporting period less the fair value of plan assets. The defined benefit obligation is calculated annually (at year end) 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 to maturity approximating to the terms of the related pension obligation. In countries where there is no deep market in such bonds, the market rates on government bonds are used.

Actuarial gains and losses arising from experience adjustments and changes in actuarial assumptions are charged or credited to equity in other comprehensive income in the period in which they arise. Past-service costs are recognized immediately in income.

For defined benefit plans, net interest income/expense is calculated based on the surplus or deficit derived by the difference between the defined benefit obligations less plan assets.

For defined contribution plans, the Company pays contributions to publicly or privately administered pension insurance plans on a mandatory, contractual or voluntary basis. The Company has no further payment obligations once the contributions have been paid. The contributions are recognized as employee benefit expense when they are due. Prepaid contributions are recognized as an asset to the extent that a cash refund or a reduction in the future payments is available.

Mexico
Ternium Mexico has defined benefit and defined contribution plans.

The valuation of the liabilities for the defined benefit employee retirement plans (pensions and seniority premiums) covers all employees and is based primarily on their years of service, their present age and their remuneration at the date of retirement. The cost of the employee retirement plans (pension, health-care expenses and seniority premiums) is recognized as an expense in the year in which services are rendered in accordance with actuarial studies made by independent

actuaries. The formal retirement plans are congruent with and complementary to the retirement benefits established by the Mexican Institute of Social Security. Additionally, the Company has established a plan to cover health-care expenses of retired employees. The Company has established a commitment for the payment of pensions and seniority premiums, as well as for health-care expenses.

The defined contribution plans provide a benefit equivalent to the capital accumulated with the company's contributions, which are provided as a match of employees' contributions to the plan. The plan provides vested rights according to the years of service and the cause of retirement.

Argentina
Ternium Argentina implemented an unfunded defined benefit employee retirement plan for certain senior officers. The plan is designed to provide certain benefits to those officers (additional to those contemplated under applicable Argentine labor laws) in case of termination of the employment relationship due to certain specified events, including retirement. This unfunded plan provides defined benefits based on years of service and final average salary.

2. Termination benefits

Termination benefits are payable when employment is terminated before the normal retirement date, or whenever an employee accepts voluntary redundancy in exchange for these benefits. The Company recognizes termination benefits when it is demonstrably committed to either: (i) terminating the employment of current employees according to a detailed formal plan without possibility of withdrawal or (ii) providing termination benefits as a result of an offer made to encourage voluntary redundancy.

3. Other compensation obligations
Employee entitlements to annual leave and long-service leave are accrued as earned.

During 2007, Ternium launched an incentive retention program (the "Program") applicable to certain senior officers and employees of the Company, who will be granted a number of Units throughout the duration of the Program. The value of each of these Units is based on Ternium's shareholders' equity (excluding non-controlling interest). Also, the beneficiaries of the Program are entitled to receive cash amounts based on (i) the amount of dividend payments made by Ternium to its shareholders, and (ii) the number of Units held by each beneficiary to the Program. Units vest ratably over a period of four years and will be redeemed by the Company ten years after grant date, with the option of an early redemption at seven years after grant date. As the cash payment of the benefit is tied to the book value of the shares, and not to their market value, Ternium valued this long-term incentive program as a long term benefit plan as classified in IAS 19.

As of December 31, 2018 and 2017, the outstanding liability corresponding to the Program amounts to $43.0 million and $30.8 million, respectively. The total value of the units granted to date under the program, considering the number of units and the book value per share as of December 31, 2018 and 2017, is $42.2 million and $30.3 million, respectively.
Under Mexican law, Ternium's subsidiaries are required to pay their employees an annual benefit which is determined as a percentage of taxable profit for the year.

4. Social security contributions
Social security laws in force in the countries in which the Company operates provide for pension benefits to be paid to retired employees from government pension plans and/or private fund managed plans to which employees may elect to contribute. As stipulated by the respective laws, Ternium Argentina and Ternium Mexico make monthly contributions calculated based on each employee's salary to fund such plans. The related amounts are expensed as incurred. No additional liabilities exist once the contributions are paid.

P. PROVISIONS AND OTHER LIABILITIES
Ternium has certain contingencies with respect to existing or potential claims, lawsuits and other proceedings. Unless otherwise specified, Ternium accrues a provision for a present legal or constructive obligation as a result of a past event, when it is probable that future cost could be incurred and that cost can be reasonably estimated. Generally, accruals are based on developments to date, Ternium's estimates of the outcomes of these matters and the advice of Ternium's legal advisors.

Q. TRADE PAYABLES
Trade payables are recognized initially at fair value and subsequently measured at amortized cost using the effective interest method.

Q. REVENUE RECOGNITION AND OTHER INCOME
Revenue is recognized at a point of time from sales to direct customers upon the satisfaction of performance obligations, which occurs when control of the goods transfers to the customer and the customer obtains the benefits from the goods, the potential cash flows and the transaction price can be measured reliably, and it is probable that the Company will collect the consideration in connection with the exchange of the goods. The control over the goods is obtained by the customer depending on when the goods are made available to the shipper or the customer takes possession of the goods, depending on the delivery terms. The Company considers that it has completed its performance obligations when the goods are delivered to its customers or to a shipper who will transport the goods to its customers. The revenue recognized by the Company is measured at the transaction price of the consideration received or receivable to which the Company is entitled to, reduced by estimated returns and other customer credits, such as discounts and volume rebates, based on the expected value to be realized and after eliminating sales within the group.

Interest income is recognized on an effective yield basis.

S. 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. Qualifying assets are assets that necessarily take a substantial period of time to get ready for their 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.

The amount of borrowing costs that Ternium capitalized during a period will not exceed the amount of borrowing costs incurred during that period. At December 31, 2018, 2017 and 2016, the capitalized borrowing costs were of $7.4 million, $0.5 million and $1.7 million, respectively.

T. COST OF SALES, SELLING, GENERAL AND ADMINISTRATIVE EXPENSES
Cost of sales and expenses are recognized in the income statement on the accrual basis of accounting.

Commissions, freight and other selling expenses, including shipping and handling costs, are recorded in Selling, general and administrative expenses in the Consolidated Income Statement.

U. STRIPPING COSTS
Stripping costs are the costs associated with the removal of overburden and other waste materials and can be incurred before the mining production commences (development stripping) or during the production stage (production stripping).

Development stripping costs that contribute to the future economic benefits of mining operations are capitalized as intangible assets (Mining assets). Production stripping costs which are part of on-going activities are included in the cost of the inventory produced (that is extracted) at each mine during the period in which they are incurred.

Capitalization of development stripping costs finishes when the commercial production of the mine commences. At that time, all development stripping costs are presented within Mining assets and depreciated on a unit-of-production basis. It is considered that commercial production begins when the production stage of mining operations begins and continues throughout the life of a mine.

V. MINING DEVELOPMENT COSTS
Mining development costs are the costs associated to the activities related to the establishment of access to the mineral reserve and other preparations for commercial production. These activities often continue during production.

Development expenditures are capitalized and classified as Work in progress. On completion of development, all assets included in Work in progress are individually

reclassified to the appropriate category of property, plant and equipment and depreciated accordingly.

W. ASSET RETIREMENT OBLIGATIONS
Ternium records asset retirement obligations ("ARO") initially at the fair value of the legal or constructive obligation in the period in which it is incurred and capitalizes the ARO by increasing the carrying amount of property, plant and equipment. The fair value of the obligation is determined as the discounted value of the expected future cash flows and is included in Provisions. The liability is accreted to its present value through net financing cost and the capitalized cost is depreciated based in the unit of production method.

X. EARNINGS PER SHARE
Earnings per share are calculated by dividing the net income attributable to shareholders by the daily weighted average number of ordinary shares issued during the year, excluding the average number of shares of the parent Company held by the Group. There are no dilutive securities for the periods presented.

Y. DERIVATIVE FINANCIAL INSTRUMENTS AND HEDGING ACTIVITIES

Ternium designates certain derivatives as hedges of a particular risk associated with a recognized asset or liability or a highly probable forecast transaction. These transactions are classified as cash flow hedges (mainly interest rate swaps, collars, currency forward contracts on highly probable forecast transactions and commodities contracts). The effective portion of the fair value of derivatives that are designated and qualify as cash flow hedges is recognized in OCI. Amounts accumulated in OCI are recognized in the income statement in the same period as any offsetting losses and gains on the hedged item. The gain or loss relating to the ineffective portion is recognized immediately in the income statement. The fair value of Ternium derivative financial instruments (asset or liability) continues to be reflected in the statement of financial position.

For transactions designated and qualifying for hedge accounting, Ternium documents the relationship between hedging instruments and hedged items, as well as its risk management objectives and strategy for undertaking various hedge transactions. At December 31, 2018 and

2017, the effective portion of designated cash flow hedges (net of taxes) amounted to $0.5 million and $0.7 million, respectively, and were included under "changes in the fair value of derivatives classified as cash flow hedges" line item in the statement of comprehensive income (see Note 27 (A)).

More information about accounting for derivative financial instruments and hedging activities is included in Note 29 "Financial risk management".

Z. TREASURY SHARES

Acquisitions of treasury shares are recorded at acquisition cost, deducted from equity until disposal. The gains and losses on disposal of treasury shares are recognized under "Reserves" in the consolidated statement of financial position.

AA. CASH FLOW

The consolidated statements of cash flows have been prepared using the indirect method and contain the use of the following expressions and their respective meanings:

a) Operating activities: activities that constitute ordinary Group revenues, as well as other activities that cannot be qualified as investing or financing.

b) Investing activities: acquisition, sale or disposal by other means of assets in the long-term and other investments not included in cash and cash equivalents.

c) Financing activities: activities that generate changes in the size and composition of net equity and liabilities that do not form part of operating activities.

BB. CRITICAL ACCOUNTING ESTIMATES

The preparation of financial statements requires management to make estimates and judgments that affect the reported amounts of assets, liabilities, revenues and expenses, and the related disclosure of contingent assets and liabilities. 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. Management makes estimates and assumptions concerning the future. Actual results may differ significantly from these estimates under different assumptions or conditions.

The principal 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 addressed below.

1. Goodwill impairment test

Assessment of the recoverability of the carrying value of goodwill requires significant judgment. Management evaluates goodwill allocated to the operating units for impairment on an annual basis or whenever there is an impairment indicator.

Goodwill is tested at the level of the CGUs. Impairment testing of the CGUs is carried out and the value in use determined in accordance with the accounting policy stated in Note 4(F). The discount rates used for these tests are based on Ternium's weighted average cost of capital adjusted for specific country and currency risks associated with the cash flow projections. The discount rate used at December 31, 2018 was 11.68% and no impairment charge resulted from the impairment test performed. See Notes 4(F) and 4(E)(4).

2. Income taxes

Management calculates current and deferred income taxes according to the tax laws applicable to each subsidiary in the countries in which such subsidiaries operate. However, certain adjustments necessary to determine the income tax provision are finalized only after the balance sheet is issued. In cases in which the final tax outcome is different from the amounts that were initially recorded, such differences will impact the income tax and deferred tax provisions in the period in which such determination is made.

Also, when assessing the recoverability of tax assets, management considers the scheduled reversal of deferred tax liabilities, projected future taxable income and tax planning strategies.

3. Loss contingencies
Ternium is subject to various claims, lawsuits and other legal proceedings that arise in the ordinary course of business, including customer claims in which a third party is seeking reimbursement or indemnity. The Company's liability with respect to such claims, lawsuits and other legal proceedings cannot be estimated with certainty. Periodically, management reviews the status of each significant matter and assesses potential financial exposure. If the potential loss from the claim or proceeding is considered probable and the amount can be reasonably estimated, a liability is recorded. Management estimates the amount of such liability based on the information available and the assumptions and methods it has concluded are appropriate, in accordance with the provisions of IFRS. Accruals for such contingencies reflect a reasonable estimate of the losses to be incurred based on information available, including the relevant litigation or settlement strategy, as of the date of preparation of these financial statements. As additional information becomes available, management will reassess its evaluation of the pending claims, lawsuits and other proceedings and revise its estimates. The loss contingencies provision amounts to $643.9 million and $768.5 million as of December 31, 2018 and 2017, respectively.

4. Allowance for obsolescence of supplies and spare parts and slow-moving inventory
Management assesses the recoverability of its inventories considering their selling prices or whether they are damaged or have become wholly or partly obsolete.

Net realizable value is the estimated selling price in the ordinary course of business, less the costs of completion and selling expenses.

The Company establishes an allowance for obsolete or slow-moving inventory in connection with finished goods and goods in process. The allowance for slow-moving inventory is recognized for finished goods and goods in process based on management's analysis of their aging. In connection with supplies and spare parts, the calculation is based on management's analysis of their aging, the capacity of such materials to be used based on their levels of preservation and maintenance, and their potential obsolescence due to technological change.

As of December 31, 2018 and 2017, the Company recorded no allowance for net realizable value and $55.5 million and $36.2 million, respectively, as allowance for obsolescence.

5. Useful Lives and Impairment of Property, Plant and Equipment and Other Long-lived Assets
In determining useful lives, management considered, among others, the following factors: age, operating condition and level of usage and maintenance. Management conducted visual inspections for the purpose of (i) determining whether the current conditions of such assets are consistent with normal conditions of assets of similar age; (ii) confirming that the operating conditions and levels of usage of such assets are adequate and consistent with their design; (iii) establishing obsolescence levels and (iv) estimating life expectancy, all of which were used in determining useful lives. Management believes, however, that it is possible that the periods of economic utilization of property, plant and equipment may be different than the useful lives so determined. Furthermore, management believes that this accounting policy involves a critical accounting estimate because it is subject to change from period to period as a result of variations in economic conditions and business performance.

When assessing whether an impairment indicator may exist, the Company evaluates both internal and external sources of information, such as the following:

- whether significant changes with an adverse effect on the entity have taken place during the period, or will take place in the near future, in the technological, market, economic or legal environment in which the entity operates or in the market to which an asset is dedicated;
- whether market interest rates or other market rates of return on investments have increased during the period, and those increases are likely to affect the discount rate used in calculating an asset's value in use and decrease the asset's recoverable amount materially;
- whether the carrying amount of the net assets of the entity is more than its market capitalization;

- whether evidence is available of obsolescence or physical damage of an asset.
- whether significant changes with an adverse effect on the entity have taken place during the period, or are expected to take place in the near future, in the extent to which, or manner in which, an asset is used or is expected to be used. These changes include the asset becoming idle, plans to discontinue or restructure the operation to which an asset belongs, plans to dispose of an asset before the previously expected date, and reassessing the useful life of an asset as finite rather than indefinite; and
- whether evidence is available from internal reporting that indicates that the economic performance of an asset is, or will be, worse than expected.

Considering the economic situation in Argentina, the Company tested the recoverability of its investment in Ternium Argentina as of December 31, 2018, resulting in no impairment charges to be recognized.

Considering that no impairment indicators were identified in the rest of subsidiaries as of December 31, 2018 and 2017, the Company additionally tested the value of the goodwill for impairment, resulting in no impairment charges to be recognized.

6. Allowances for doubtful accounts
Management makes estimates of the uncollectibility of our accounts receivable. Management analyses the trade accounts receivable on a regular basis and applies the IFRS 9 simplified approach to measuring expected credit losses, which uses a lifetime expected loss allowance for all trade receivables. To measure the expected credit losses, trade receivables are grouped based on shared credit risk characteristics and the days past due.

Allowances for doubtful accounts are adjusted periodically in accordance with the results obtained in the provision matrix. To calibrate the provision matrix, Management adjusts its historical credit loss experience with current and forward-looking information that might affect the customers' historical default rates As of December 31, 2018 and 2017, allowance for doubtful accounts totals $14.3 million and $16.5 million, respectively.

7. Mining reserve estimates
Reserves are estimates of the amount of product that can be economically and legally extracted from the Company's mining concessions. In order to estimate reserves, a range of geological, technical and economic factors is required to be considered. Estimating the quantity and/or grade of reserves requires complex and difficult geological judgments to interpret the data. Because the economic assumptions used to estimate reserves change from period to period, and because additional geological data is generated during the course of operations, estimates of reserves may change from period to period.

Changes in reported reserves may affect the Company's financial results and financial position, including the following:

- Asset carrying amounts may be affected due to changes in estimated future cash flows.
- Depreciation and amortization charges may change where such charges are determined by the units of production basis, or where the useful economic lives of assets change.
- Stripping costs recognized in Mining assets or charged to results may change due to changes in stripping ratios or the units of production basis of depreciation.
- Asset retirement obligations may change where changes in estimated reserves affect expectations about the timing or cost of these activities.

8. Post-employment obligation estimates

The Company estimates at each year-end the provision necessary to meet its post-employment obligations in accordance with the advice from independent actuaries. The calculation of post-employment and other employee obligations requires the application of various assumptions. The main assumptions for post-employment and other employee obligations include discount rates, compensation growth rates, pension growth rates and life expectancy. Changes in the assumptions could give rise to adjustments in the results and liabilities recorded and might have an impact on the post-employment and other employee obligations recognized in the future.

9. Business combinations
The recognition of business combinations requires the excess of the purchase price of acquisitions over the net book value of assets acquired to be allocated to the assets and liabilities of the acquired entity. The Company makes judgments and estimates in relation to the fair value allocation of the purchase price. If any unallocated portion is positive, it is recognized as goodwill, and if negative, it is recognized in the income statement. See further information in Note 3.

CC. APPLICATION OF IAS 29 IN FINANCIAL REPORTING OF ARGENTINE SUBSIDIARIES AND ASSOCIATES
IAS 29 "Financial Reporting in Hyperinflationary Economies" requires that the financial statements of entities whose functional currency is that of a hyperinflationary economy to be adjusted for the effects of changes in a suitable general price index and to be expressed in terms of the current unit of measurement at the closing date of the reporting period. Accordingly, the inflation produced from the date of acquisition or from the revaluation date, as applicable, must be computed in the non-monetary items.

In order to conclude on whether an economy is categorized as hyperinflationary under the terms of IAS 29, the Standard details a series of factors to be considered, including the existence of a cumulative inflation rate in three years that approximates or exceeds 100%.

Considering that the downward trend in inflation in Argentina observed in the previous year has reversed and observing a significant increase in inflation during 2018, which exceeded the 100% three-year cumulative inflation rate, and that the rest of the indicators do not contradict the conclusion that Argentina should be considered a hyperinflationary economy for accounting purposes, the Company considered that there was sufficient evidence to conclude that Argentina is a hyperinflationary economy under the terms of IAS 29 as from July 1, 2018, and, accordingly, applied IAS 29 as from that date in the financial reporting of its subsidiaries and associates with the Argentine peso as functional currency.

According to this principle, the financial statements of an entity that reports in the currency of a hyperinflationary

economy should be stated in terms of the measuring unit current on the date of the financial statements. All statement of financial position amounts that are not stated in terms of the measuring unit current on the date of the financial statements must be restated by applying a general price index. All income statement components must be stated in terms of the measuring unit current on the date of the financial statements, applying the change in the general price index that occurred since the date when revenues and expenses were originally recognized in the financial statements.

The inflation adjustment on the initial balances was calculated by means of conversion factor derived from the Argentine price indexes published by the National Institute of Statistics (INDEC). The average index for the year period ended December 31, 2018, was 1.48.

The main procedures for the above-mentioned adjustment are as follows:

•Monetary assets and liabilities which are carried at amounts current at the balance sheet date are not restated because they are already expressed in terms of the monetary unit current at the balance sheet date.

•Non-monetary assets and liabilities which are not carried at amounts current at the balance sheet date, and components of shareholders' equity are adjusted by applying the relevant conversion factors.

•All items in the income statement are restated by applying the relevant conversion factors.

•The effect of inflation on the Company's net monetary position is included in the income statement, in Other financial income (expenses), net, under the caption Inflation adjustment results.

•The ongoing application of the re-translation of comparative amounts to closing exchanges rates under IAS 21 and the hyperinflation adjustments required by IAS 29 will lead to a difference in addition to the difference arising on the adoption of hyperinflation accounting.

The comparative figures in these consolidated financial statements presented in a stable currency are not adjusted for subsequent changes in the price level or exchange rates. This resulted in an initial difference, arising on the adoption of hyperinflation accounting, between the closing equity of the previous year and the opening equity of the current year. The Company recognized this initial difference directly in equity.

5. SEGMENT INFORMATION
REPORTABLE OPERATING SEGMENTS
The Company is organized in two reportable segments: Steel and Mining.

The Steel segment includes the sales of steel products, which comprises slabs, hot rolled coils and sheets, cold rolled coils and sheets, tin plate, welded pipes, hot dipped galvanized and electro-galvanized sheets, pre-painted sheets, billets (steel in its basic, semi-finished state), wire rod and bars and other tailor-made products to serve its customers' requirements. It also includes the sales of energy.

The Steel segment comprises four operating segments: Mexico, Southern Region, Brazil and Other markets. These four segments have been aggregated considering the economic characteristics and financial effects of each business activity in which the entity engages; the related economic environment in which it operates; the type or class of customer for the products; the nature of the products; and the production processes. The Mexico operating segment comprises the Company's businesses in Mexico. The Southern region operating segment manages the businesses in Argentina, Paraguay, Chile, Bolivia and Uruguay. The Brazil operating segment includes the business generated in Brazil. The Other markets operating segment includes businesses mainly in United States, Colombia, Guatemala, Costa Rica, Honduras, El Salvador and Nicaragua.

The Mining segment includes the sales of mining products, mainly iron ore and pellets, and comprises the mining activities of Las Encinas, an iron ore mining company in which Ternium holds a 100% equity interest and the 50% of the operations and results performed by Peña Colorada, another iron ore mining company in which Ternium maintains that same percentage over its equity interest. Both mining operations are located in Mexico. For Peña Colorada, the Company recognizes its

assets, liabilities, revenue and expenses in relation to its interest in the joint operation.

Ternium's Chief Operating Decision Maker (CEO) holds monthly meetings with senior management, in which operating and financial performance information is reviewed, including financial information that differs from IFRS principally as follows:

- The use of direct cost methodology to calculate the inventories, while under IFRS is at full cost, including absorption of production overheads and depreciation.
- The use of costs based on previously internally defined cost estimates, while, under IFRS, costs are calculated at historical cost (with the FIFO method).
- Other timing and non-significant differences.

Most information on segment assets is not disclosed as it is not reviewed by the CEO.

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Notes to the Consolidated Financial Statements (contd.)

YEAR ENDED DECEMBER 31, 2018	Steel	Mining	Inter-segment eliminations	Total
IFRS				
Net sales	11,453,420	282,000	(280,613)	11,454,807
Cost of sales	(8,524,890)	(239,893)	281,455	(8,483,328)
Gross profit	2,928,530	42,107	842	2,971,479
Selling, general and administrative expenses	(860,881)	(15,883)	—	(876,764)
Other operating income, net	12,950	706	—	13,656
Operating income - IFRS	2,080,599	26,930	842	2,108,371
MANAGEMENT VIEW				
Net sales	11,723,883	333,892	(332,505)	11,725,270
Operating income	1,768,115	91,418	(6,213)	1,853,319
Reconciliation items:				
Differences in Cost of sales				541,492
Effect of inflation adjustment (Note (4(CC))				(286,440)
Operating income - IFRS				2,108,371
Financial income (expense), net				(179,576)
Equity in earnings (losses) of non-consolidated companies				102,772
Income before income tax expense - IFRS				2,031,567
Depreciation and amortization - IFRS	(537,885)	(51,415)	—	(589,299)

YEAR ENDED DECEMBER 31, 2017	Steel	Mining	Inter-segment eliminations	Total
IFRS				
Net sales	9,700,260	271,477	(271,441)	9,700,296
Cost of sales	(7,465,751)	(212,860)	275,586	(7,403,025)
Gross profit	2,234,509	58,617	4,145	2,297,271
Selling, general and administrative expenses	(811,487)	(12,760)	—	(824,247)
Other operating income, net	(17,011)	771	—	(16,240)
Operating income - IFRS	1,406,011	46,628	4,145	1,456,784
MANAGEMENT VIEW				
Net sales	9,700,260	287,152	(287,116)	9,700,296
Operating income	1,065,605	66,694	(1,291)	1,131,008
Reconciliation items:				
Differences in Cost of sales				325,776
Operating income - IFRS				1,456,784
Financial income (expense), net				(165,090)
Equity in earnings (losses) of non-consolidated companies				68,115
Income before income tax expense - IFRS				1,359,809
Depreciation and amortization - IFRS	(424,529)	(49,770)	—	(474,299)

YEAR ENDED DECEMBER 31, 2016	Steel	Mining	Inter-segment eliminations	Total
IFRS				
Net sales	7,221,751	204,894	(202,670)	7,223,975
Cost of sales	(5,391,038)	(192,038)	198,686	(5,384,390)
Gross profit	1,830,713	12,856	(3,984)	1,839,585
Selling, general and administrative expenses	(677,007)	(10,935)	—	(687,942)
Other operating income, net	(9,543)	(382)	—	(9,925)
Operating income - IFRS	1,144,163	1,539	(3,984)	1,141,718
MANAGEMENT VIEW				
Net sales	7,221,751	208,230	(206,006)	7,223,975
Operating income	936,164	3,871	269	940,303
Reconciliation items:				
Differences in Cost of sales				201,415
Operating income - IFRS				1,141,718
Financial income (expense), net				(37,885)
Equity in earnings (losses) of non-consolidated companies				14,624
Income before income tax expense - IFRS				1,118,457
Depreciation and amortization - IFRS	(361,685)	(45,205)	—	(406,890)

102. Ternium

GEOGRAPHICAL INFORMATION
The Company has revenues attributable to the Company's country of incorporation (Luxembourg) related to a contract acquired as a part of the business combination disclosed in Note 3.

For purposes of reporting geographical information, net sales are allocated based on the customer's location. Allocation of depreciation and amortization is based on the geographical location of the underlying assets.

YEAR ENDED DECEMBER 31, 2018	Mexico	Southern region	Brazil and Other markets (2)	Total
Net sales	6,345,137	1,941,168	3,168,502	11,454,807
Non-current assets (1)	4,093,288	1,071,705	1,665,140	6,830,133
YEAR ENDED DECEMBER 31, 2017				
Net sales	5,629,267	2,316,444	1,754,585	9,700,296
Non-current assets (1)	4,042,914	643,411	1,756,007	6,442,332
YEAR ENDED DECEMBER 31, 2016				
Net sales	4,491,761	1,867,622	864,592	7,223,975
Non-current assets (1)	4,108,539	634,048	235,947	4,978,534

(1) Includes Property, plant and equipment and Intangible assets.
(2) Includes the assets related to the business acquisition disclosed in Note 3.

REVENUES BY PRODUCT

YEAR ENDED DECEMBER 31,	2018	2017	2016
Semi-finished [(1)]	103,099	123,752	19,878
Slabs	1,818,235	715,513	—
Hot rolled [(2)]	3,961,144	3,366,697	2,763,403
Cold rolled	1,264,940	1,321,663	1,110,671
Coated [(3)]	3,506,040	3,391,328	2,900,009
Roll-formed and tubular [(4)]	437,514	472,253	413,991
Other products [(5)]	363,835	309,090	16,023
Total Sales	11,454,807	9,700,296	7,223,975

(1) Semi-finished includes slabs, billets and round bars.
(2) Hot rolled includes hot rolled flat products, merchant bars, reinforcing bars, stirrups and rods.
(3) Coated includes tin plate and galvanized products.

(4) Roll-formed and tubular includes tubes, beams, insulated panels, roofing and cladding, roof tiles, steel decks and pre-engineered metal building systems.
(5) Other products include mainly pig iron.

6. COST OF SALES

YEAR ENDED DECEMBER 31,	2018	2017	2016
INVENTORIES AT THE BEGINNING OF THE YEAR	2,550,930	1,647,869	1,579,120
Acquisition of business (Note 3)	—	400,047	—
Effect of initial inflation adjustment (Note 4 (CC))	191,708	—	—
Translation differences	(413,436)	(97,148)	(82,515)
PLUS: CHARGES FOR THE YEAR			
Raw materials and consumables used and other movements	6,961,704	6,337,283	4,060,783
Services and fees	158,551	110,949	77,698
Labor cost	699,447	673,821	560,513
Depreciation of property, plant and equipment	456,522	348,415	314,649
Amortization of intangible assets	25,374	35,275	40,225
Maintenance expenses	519,625	480,496	457,734
Office expenses	8,586	7,350	7,112
Insurance	8,769	7,968	8,432
Charge of obsolescence allowance	17,322	(4,028)	4,600
Recovery from sales of scrap and co-products	(27,744)	(25,973)	(21,010)
Others	15,799	31,631	24,918
LESS: INVENTORIES AT THE END OF THE YEAR	(2,689,829)	(2,550,930)	(1,647,869)
Cost of Sales	8,483,328	7,403,025	5,384,390

TERNIUM S.A.
Notes to the Consolidated Financial Statements (contd.)

7. SELLING, GENERAL AND ADMINISTRATIVE EXPENSES

YEAR ENDED DECEMBER 31,	2018	2017	2016
Services and fees (1)	76,066	86,990	65,965
Labor cost	241,552	229,529	193,118
Depreciation of property, plant and equipment	13,561	12,345	13,589
Amortization of intangible assets	93,842	78,264	38,427
Maintenance and expenses	5,096	5,038	3,092
Taxes	95,072	98,786	90,166
Office expenses	35,663	35,922	36,223
Freight and transportation	300,676	259,898	234,801
Increase of allowance for doubtful accounts	1,629	685	288
Others	13,607	16,790	12,273
Selling, general and administrative expenses	876,764	824,247	687,942

(1) For the year ended December 31, 2018, it includes fees accrued for professional services rendered by PwC to Ternium S.A. and its subsidiaries that amounted to $4,704, including $3,937 for audit services, $61 for audit-related services, $281 for tax services and $425 for all other services.
For the year ended December 31, 2017, it includes fees accrued for professional services rendered by PwC to Ternium S.A. and its subsidiaries that amounted to $3,501, including $2,863 for audit services, $91

for audit-related services, $229 for tax services and $318 for all other services.
For the year ended December 31, 2016, it includes fees accrued for professional services rendered by PwC to Ternium S.A. and its subsidiaries that amounted to $3,385, including $2,869 for audit services, $99 for audit-related services, $251 for tax services and $166 for all other services.

8. LABOR COSTS (INCLUDED IN COST OF SALES AND SELLING, GENERAL AND ADMINISTRATIVE EXPENSES)

YEAR ENDED DECEMBER 31,	2018	2017	2016
Wages salaries and social security costs	884,536	849,354	698,825
Termination benefits	26,601	25,783	27,048
Post-employment benefits (Note 21 (I))	29,862	28,213	27,758
Labor costs	940,999	903,350	753,631

As of December 31, 2018, 2017 and 2016, the quantity of employees was 20,660, 21,335 and 16,725, respectively.

9. OTHER OPERATING INCOME (EXPENSES), NET

YEAR ENDED DECEMBER 31,	2018	2017	2016
Results of sundry assets	1,895	1,190	1,270
Provision for legal claims and other matters (Note 19 and 25 (II))	7,625	—	—
Other operating income	4,136	—	—
Other operating income	13,656	1,190	