



DIVISION OF
CORPORATION FINANCE

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549

November 26, 2014

Via E-mail

Pablo Brizzio, CFO

Ternium S.A.

29, Avenue de la Porte-Neuve — 3rd floor

L-2227 Luxembourg

**RE: Ternium S.A.
December 31, 2013 Form 20-F filed April 30, 2014
Form 6-K filed November 5, 2014
Response dated September 12, 2014
File No. 1-32734**

Dear Mr. Brizzio:

We have reviewed your response and have the following comments. Please respond to this letter within ten business days by providing the requested information or by advising us when you will provide the requested response.

1. We understood from your remarks during our October 26, 2014 conference call that your value-in-use calculation includes estimated future cash flows that are expected to arise from the increase in economic benefits associated with the future development of the compact ore project and with the future development of the Sudeste port. Please explain to us how your value-in-use calculation complies with the guidance in paragraphs 48 and 49 and Illustrative Example 6 of IAS 36 as it relates to these estimated future cash flows.
2. We note that your value-in-use calculation as of December 31, 2013 reflects significant increases in EBITDA margin from those recently experienced during the past two years, since you became owners of Usiminas. We understood from your remarks during our October 26, 2014 conference call that you attribute the increases to expected results from implementation of the “turnaround program”. Please explain to us in greater detail the turnaround program. Include in your response the following:
 - when the program was launched;
 - what steps have been taken under the program and when those steps were taken;
 - what steps are left to be undertaken and the timing you expect those next steps to occur; and
 - any other reasons that contribute to the expected increases in EBITDA margin and the amounts attributed to each reason.
3. Please demonstrate to us the reasonableness of the cash flows in your value-in use calculation by comparing past projections of cash flows for each period in which you performed a value in use calculation to the cash flows actually generated. Explain to us the causes of any significant differences. Refer to IAS 36.34.

4. Please explain to us how your value-in-use calculation reflects uncertainties inherent in the forecasts, including but not limited to, uncertainties relating to the Sudeste port development, development of the compact ore project, ability to generate forecasted EBITDA margins, and other uncertainties. To the extent the calculation does not reflect any adjustments for uncertainties, explain to us the reasons for not taking into account the uncertainties. Refer to IAS 36.30.d.
5. We note from your disclosure on page 12 of your Form 20-F that there were expectations of a weaker industrial environment in Brazil (where industrial production and consequently steel demand suffered downward adjustments during 2012) and a higher degree of uncertainty regarding future prices of iron ore. Please tell us how your cash flow forecast is reflective of the weaker environment and how the selected discount rate is reflective of the uncertainties of ore prices.

Form 6-K dated November 5, 2014

6. We note from page 15 of your interim financial statements furnished on Form 6-K dated November 5, 2014 that you reviewed your value in use calculation with the information currently available and determined no need for an impairment charge. We further note on page 21 that you entered into an agreement to purchase on October 2, 2014, 51.4 million ordinary shares of Usiminas at a price of BRL 12 (approximately \$4.61) per share. Please address the following related to these disclosures.
 - a. Please tell us what you determined the fair value less costs to sell (FVLCS) to be at September 30, 2014. To the extent the FVLCS per share was different than the BRL 12/share paid on November 5, 2014, please explain to us in qualitative and quantitative terms the reasons for the difference and why you believe the price paid for the October 2014 transaction is not reflective of the fair value of the existing shares held in Usiminas.
 - b. Please explain to us in qualitative terms the reasons for any difference between the value in use and FVLCS, and provide us with your calculation of value in use. In addition, highlight for us the quantitative differences between the underlying economics of the shares purchased in October and the existing shares to which value in use is measured.
 - c. Please explain to us the reasons for the premium paid in the October 2014 transaction above the trading price of Usiminas' common shares of approximately \$2.67/share on October 2, 2014. In your response, describe any rights that you have above a common shareholder and describe any shareholder rights acquired in the October transaction that may be different from the previously held shares.

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7. We note that your stock price closed October 2 and 3, 2014 at \$23.65/share and \$21.70/share, respectively, representing a decrease of over 8%. Please explain to us why the market reacted negatively to the announcement of the share purchase agreement.

You may contact Al Pavot at (202) 551-3738 or the undersigned Accounting Branch Chief at (202) 551-3355 if you have any questions.

Sincerely,

/s/ Terence O'Brien

Terence O'Brien
Accounting Branch Chief