



DIVISION OF
CORPORATION FINANCE

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

April 25, 2013

Via E-Mail

Ken Reali
Chief Executive Officer
TranS1 Inc.
110 Horizon Drive
Suite 230
Raleigh, NC 27615

**Re: TranS1 Inc.
Amendment No. 1 to Preliminary Proxy Statement on Schedule 14A
Filed April 10, 2013
File No. 001-33744**

Dear Mr. Reali:

We have reviewed your filing and have the following comments. In some of our comments, we may ask you to provide us with information so we may better understand your disclosure.

Please respond to this letter within ten business days by amending your filing, by providing the requested information, or by advising us when you will provide the requested response. If you do not believe our comments apply to your facts and circumstances or do not believe an amendment is required, please tell us why in your response.

After reviewing any amendment to your filing and the information you provide in response to these comments, we may have additional comments.

Background of the Merger, page 31

1. Please expand your response to prior comment 7 to disclose how Baxano was “the most viable” option out of the other potential acquisition targets your board identified.

Additional Indebtedness, page 54

2. We note your revision in response to prior comment 13 and your statement on page 54 that holders of shares of Baxano Series C Preferred Stock will receive less consideration for the merger due to the Baxano Notes issued on March 28, 2013. Please explain how

this affects your calculation of the merger consideration disclosed throughout your filing. Also, please refer to the second bullet point on page 36 which states that the proceeds in the transaction are not sufficient to provide consideration to all Baxano shareholders. It is not clear what you mean by this disclosure, since apparently all Baxano shareholders will receive the same per share consideration.

Baxano Financial Analyses, page 55

3. We note that Stifel relied on your financial projections and estimates when preparing the Discounted Cash Flow Analysis. Please revise your description of the Discounted Cash Flow Analysis to disclose the projections upon which Stifel relied.

Merger Financial Analysis, page 56

4. We note that Stifel relied on your financial projections and estimates when preparing the Pro Forma Discounted Cash Flow Analysis. Please revise your description of the Pro Forma Discounted Cash Flow Analysis to disclose the projections upon which Stifel relied. These disclosures should include a list and quantification of the “Synergy Assumptions” underlying any of the analyses.

Security Ownership of Certain Beneficial Owners and Management, page 99

5. Please revise footnote 4 to identify the natural person or persons who exercise voting or dispositive control over the securities.

We urge all persons who are responsible for the accuracy and adequacy of the disclosure in the filing to be certain that the filing includes the information the Securities Exchange Act of 1934 and all applicable Exchange Act rules require. Since the company and its management are in possession of all facts relating to a company’s disclosure, they are responsible for the accuracy and adequacy of the disclosures they have made.

In responding to our comments, please provide a written statement from the company acknowledging that:

- the company is responsible for the adequacy and accuracy of the disclosure in the filing;
- staff comments or changes to disclosure in response to staff comments do not foreclose the Commission from taking any action with respect to the filing; and
- the company may not assert staff comments as a defense in any proceeding initiated by the Commission or any person under the federal securities laws of the United States.

Ken Reali
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You may contact Gary Newberry at (202) 551-3761 or Lynn Dicker at (202) 551-3616 if you have questions regarding comments on the financial statements and related matters. Please contact Brian Soares at (202) 551-3580 or me at (202) 551-3528 with any other questions.

Sincerely,

/s/ Amanda Ravitz

Amanda Ravitz
Assistant Director

cc (via-email): Amy Wallace