

# Investee's Net Profits Adjustment in Balance Sheet Consolidation: for the Reasons of Internal Traction

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**Abstract:** In accordance with China enterprise accounting standards, investee's net revenues adjustment because of internal traction must be done before the elimination of all intra-entity long-term equity investments in the balance sheet consolidation. The paper develops a universal model with the ability to calculate the adjusted investee's net profits accurately without analyzing the offset entries of the internal traction. The performance of the proposed model is benchmarked against the method of offset entries on internal traction.

## Introduction

According to China enterprise accounting standards, investee's net profits adjustment for the reasons of internal traction must be done before the elimination of internal long-term equity investments in the balance sheet consolidation [1, 2]. Many kinds of assets could be intra-entity transferred and the unrealized intra-entity gross profits would influence several consecutive accounting periods. So, the purpose of this article is to produce a universal model with the ability to calculate the adjusted investee's net profits accurately without analyzing the offset entries of the internal traction.

The paper is structured as follows. In the next section we discuss the underlying theory of the proposed model and its expression, then a typical case will be built and analyzed by comparing the proposed model with the offset entries method. So, the correctness of our model could be verified before the final conclusions.

## Theoretical Framework

To reflect the financial situations of a conglomerate objectively, offsetting the internal investment in the consolidated statement is required in both the FASB and the Chinese accounting standards. Watered profits and assets' book values through intra-entity transfers will not be recognized because associated parties could manipulate their statements to cheat public investors with the violation of the basic requirements of the accounting information quality. Intra-entity gross profits are considered realized if all the assets from internal traction are either consumed or sold to unassociated outside parties [3].

How the inner profits are inflated and becomes true is the key clue to develop our model. As for any postulated accounting period  $t$ , all the invented profits caused by internal trades will be deducted firstly whatever they are realized or not, then the part consumed or sold to the external parties will be restored. Now we set an empirical model to describe the above mentioned thoughts quantitatively as the follows.

## Empirical Model

**Variables definition.** For the observation accounting period  $t$ , we define the following variables.

$PAA_t$ - Investee's net profits after adjustment.

$PBA_t$ - Investee's net profits before adjustment, got from the subsidiary's income statement.

$IGP_t$ - Intra-entity gross profits equal to selling price minus cost of the asset transferred within a conglomerate. This item only affects the internal trading period, but not the income statement during the follow-up.

$FI_t$ - False impairment provision drew on internal trading assets except the real reduced-value allowance from the perspective of the group company, such as inventories, fixed assets impairments [4, 5].

$RP_t$ - Realized portion in the intra-entity gross profits. The paths of actualization are different because of different internal trading assets, such as through selling to external third-party, depreciation, amortization, etc.

**Model expression.** According to the above mentioned analysis, for just one intra-entity transferred asset, the model is described as follows:

$$PAA_t = PBA_t - (IGP_t - FI_t) + RP_t \quad (1)$$

If there are several internal trades, the formula will be:

$$PAA_t = PBA_t - (\sum IGP_t - \sum FI_t) + \sum RP_t \quad (2)$$

In the above formulas,  $-(IGP_t - FI_t)$  or  $-(\sum IGP_t - \sum FI_t)$  embodies the deduction of the inflated profits from internal trading assets in the phase  $t$ , and  $+ RP_t$  or  $+\sum RP_t$  embodies the realized profits in the intra-entity gross profits through selling out, depreciation, amortization, etc.

## Model Test

In order to test the applicability and accuracy of the proposed model, we constructed a typical case covering two accounting periods which embraced an internal fixed asset traction and two inventories tractions at the same time to illustrate whether the model could take effect or not.

**A typical case description.** Assume that company A and B have the same accounting period and accounting policies, company A owns 70% voting shares of company B.

On June 30, 2014, company A bought a management equipment U with original price 5.6 million yuan from company B at the cost of 4.32 million yuan, the equipment was received on the same day and put into use. Company A expected the equipment U's service life as eight years and net salvage value as zero, using the straight-line method to depreciate.

In 2014, company A sold 100 pieces of product V to company B at the unit price (cost) of 0.05 (0.03) million yuan without impairment provision for product V. And then company B sold 40 pieces of product V to some outside parties. At the end of 2014, the net realizable value of the rest inventories was 2.8 million yuan. In this year, the unadjusted net profits of company B were 29.8 million yuan.

In 2015, the company A sold 50 pieces of product W to company B at the unit price (cost) of 0.08 (0.06) million yuan without impairment provision for product W. Company B sold out 30 articles of product V and 40 articles of product W. At the end of 2015, company B found that due to the continued market price falling, the net realizable value of products V and W respectively dropped to one million yuan and 0.4 million yuan. In 2015, the unadjusted net profits of company B were 20.94 million yuan.

*Question: please calculate the adjusted net profits of company B caused by internal trades at the end of 2014 and 2015 separately.*

**Case analysis through offset entries vs model in 2014.** We used the offset entries method and the proposed model orderly to analyze the adjusted investee's net profits caused by internal tractions.

Table 1 offset entries of internal tractions in 2014 (unit: ten thousand yuan).

Items	Debit	Credit
Fixed assets-original price of U (560-432)	128	
Non-operating expenditure-U		128
Administrative expenses-U	8	
Fixed assets-accumulated depreciation of U (128/8*6/12)		8
Main business revenue -V (5*100)	500	
Main business cost-V		380
Inventories-V (60 * (5-3))		120
Inventories-provision for inventory price decline of V	20	
Asset impairment loss-V ((100-40)*5-280)		20

In 2014, the income statement related items in table 1 were summarized to get the adjusted investee's net profits=2980+128-8-500+380+20=3000.

Table 2 Case analysis through model in 2014 (unit: ten thousand yuan).

Internal tractions	PBA <sub>2014</sub>	IGP <sub>2014</sub>	FI <sub>2014</sub>	RP <sub>2014</sub>	PAA <sub>2014</sub>
Fixed asset U		-128	0	-8	
Product V		200	20	80	
total	2980	72	20	72	3000

For fixed asset U:  $IGP_{2014}=432-560=-128$ ,  $FI_{2014}=0$ ,  $RP_{2014}=-128/8*6/12=-8$ .

For product V:  $IGP_{2014}=(5-3)*100=200$ ,  $FI_{2014}=5*60-280=20$ ,  $RP_{2014}=(5-3)*40=80$ .

In 2014, the results of the two methods were consistent with each other, but using the proposed model seemed to be a better choice.

**Case analysis through offset entries vs model in 2015.** We used the offset entries method first.

Table 3 offset entries of internal tractions in 2015 (unit: ten thousand yuan).

Items	Debit	Credit
Fixed assets-original price of U (560-432)	128	
Undistributed profits-at beginning of the year for U		128
Undistributed profits-at beginning of the year for U (128/8*6/12)	8	
Fixed assets-accumulated depreciation of U (128/8*6/12)		8
Administrative expenses	16	
Fixed assets-accumulated depreciation of U (128/8)		16
Undistributed profits-at beginning of the year for V (60*(5-3))	120	
Main business cost-V		120
Main business cost-V	60	
Inventories-V (30 * (5-3))		60
Inventories-provision for inventory price decline of V ((100-40)*5-280)	20	
Undistributed profits-at beginning of the year for V		20
Main business cost-V	10	
Inventories-provision for inventory price decline of V		10
Inventories-provision for inventory price decline of V	40	
Asset impairment loss-V		40
Main business revenue -W(50*8)	400	
Main business cost-W		380
Inventories-W (10*(8-6))		20
Inventories-provision for inventory price decline of W	20	
Asset impairment loss-W		20

In 2015, the income statement related items in table 3 were summarized to get adjusted investee's net profits= $2094-16+120-60-10+40-400+380+20=2168$ . And then we use our proposed model to analyze the case with the following table.

Table 4 Case analysis through model in 2015 (unit: ten thousand yuan).

Internal tractions	PBA <sub>2015</sub>	IGP <sub>2015</sub>	FI <sub>2015</sub>	RP <sub>2015</sub>	PAA <sub>2015</sub>
Fixed asset U		0	0	-16	
Product V		0	40	50	
Product W		100	20	80	
total	2094	100	60	114	2168

For fixed asset U: In 2014, the loss of company B caused by fixed asset U did not affect the profits in 2015, namely  $IGP_{2015}=0$ . No impairment provision considered, so,  $FI_{2015}=0$ .  $RP_{2015}=-128/8=-16$ .

For product V: In 2014, the gains of company B caused by product V did not affect the profits in 2015, namely  $IGP_{2015}=0$ . In 2015, the book value of product V before impairment test was 140 and the net realizable value was 100, so,  $FI_{2015}=140-100=40$ . The real cost for the sold product V was 30 per piece,  $RP_{2015}=140-30*3=50$ .

For product W:  $IGP_{2015}=(8-6)*50=100$ . In 2015, the book value of the ten pieces of product W before impairment test was 80 and the net realizable value was 40, the Inventories falling price allowance was 40 in which just 20 was a false impairment (the part below the cost 60 was the real falling, equaled to 20),  $FI_{2015}=20$ .  $RP_{2015}=(8-6)*40=80$ .

Comparing the results of the two methods in 2015, they were also consistent with each other and the proposed model seemed more concise than journalizing offset entries.

## Conclusions

From the core clue of how the inner profits were invented and became true, we developed a universal model to calculate the adjusted investee's net profits without dealing with the offset entries of the internal tractions. The accuracy and conciseness of the model had been proved by a well-constructed typical case covering two accounting periods which embraced an internal fixed asset traction and two inventories tractions. This model could be easily generalized to other kind of internal tractions such as intangible assets [6], investment real estates [7] etc. and viewed as a supplement to the method of offset entries about the internal tractions. In addition, it could be grasped easily by beginners and practitioners.

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