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Video Transcription: Standard Costing and Recording – Part 1



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Hello. In this video, we will look at the recording process of inventory, if a business chooses to use standard costing.

Businesses purchase raw materials, which are then used in the production process to make finished goods. These finished goods are then sold and the costs attached to each unit are recognised as a cost of sales expense. During the production process, the raw materials are transferred to work-in-progress, the finished units are then transferred to finished goods and finally to cost of sales when it is sold.

While it is often relatively easy to keep track of the actual units being transferred through this process, it can be extremely difficult or time-consuming to determine the exact price of the inputs that are being used as well as the quantity of inputs that are being used in this process.

Standard costing is a costing technique that can effectively trace the cost of each item as it moves through raw materials, work-in-progress, finished goods and eventually through cost of sales.

Management estimates what the standard cost of producing a unit should be, in other words, the business will have an estimated price per kilogram of raw materials purchase, the standard price, as well as an estimated number of kilograms used to produce each unit, the standard quantity. These costs, referred to as standard costs, are used to record the transfer of raw materials and other costs to work-in-progress and finished goods. Any difference between the actual price and quantity incurred, and the estimated amounts calculated using standard costs, will be recognised as a variance. In this case, it will be either a price variance or a usage variance. The variances allow management to identify and explore what has caused costs to be higher or lower than anticipated.

Let us look at an example. In this example, the actual quantity purchased of raw materials was 100kg, the actual price per kilogram, which the company paid, was R11 per kilogram. The actual quantity used per unit of output was 5kg. The standard price per kilogram was R10 per kilogram and the standard quantity allowed per unit of output was 6kg. Let us look at recording these transactions using standard costing. When raw materials are purchased, the business would record the actual quantity purchased, which was 100kg, at the standard price of R10 per kilogram. Bank is credited with actual amount. The actual cost is higher than the standard cost, and so the business recognises an unfavorable price variance and the variance account is debited. The variance account is debited because actual costs are higher than the estimated or standard cost, which will result in a lower profit.

Now let's assume, the company started producing 8 units. When raw materials are used, the raw material account is decreased or credited by R400, this is the actual quantity used of 5kg per unit at the standard price of R10 per kilogram. The work-in-progress is recorded at the standard quantity allowed, 6kg per unit and the standard price for raw materials, R10 per kilogram. This records the actual units being produced at standard cost in the work-in-progress account. The usage variance is favourable as the actual kilograms used per unit is lower than the estimated or standard kilogram per unit. This results in actual cost being lower than standard cost, which has a favourable effect on profit.



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Now, you want to see how these raw materials will make their way through the different inventory accounts, as it is being produced and sold.

Let's assume that at the end of a period, the following information is available: the actual units finished were 7 units, units sold – 5 units, the units in finished goods, which would be the units finished less the units sold is equal to 2 units and then we have 1 unit that's still in work-in-progress, being produced. The various inventory accounts will appear in the records in the following way in terms of raw materials. Remember that we used actual quantity but we are recording it at standard cost, therefore, raw materials will be your actual quantity in storage at standard price and will be equal to R600. Work-in-progress will be the actual number of units being produced at standard cost and that's R60. Your finished goods would be the actual number of finished units at standard cost, which is equal to R120 and cost of sales will be the actual units sold at standard cost, which is equal to R300.

We will also have the following variance accounts: an unfavourable raw material price variance of R100 and a favourable raw material usage variance of R80. By comparing the inventory at standard cost to the inventory at actual cost incurred, we can see that the quantity variance of R80 and the price variance of R100, reconciles the two. The actual quantity per item used was 1kg less than the standard quantity. The actual price paid per kilogram was R1 more than the standard price. Your total cost for the purchases would have been R1 100. If we take the price variance and the usage variance into account, it reconciles to the standard cost of R1 080.

These variance accounts are temporary and are only used for internal reporting purposes. Management will use these variances to investigate why costs were different to what was originally estimated. During the reporting process, where we prepare the financial statements for the external users, the variance accounts need to be closed-off. Where are these variance accounts closed off, to? If the variances are relatively small, you will just close them off to cost of sales. This will mean that your inventory accounts are still recorded at standard. The reason we do this is because the standards are considered to be reasonably accurate.

The journal entry would be to debit cost of sales with R20, to debit raw material usage variance with R80 and to credit the raw materials price variance with R100. The cost of sales account will have a balance of R320 and the inventory account will still be at standard cost.

What if the variances are not small? The implication of this is that the standards are not very accurate, and we will have to adjust the inventory balances, which are currently recorded at standard to rather be recorded at actual cost. We call this process the proration of our variance accounts. So let us see how we would prorate the price variance as well as the usage variance for raw materials. Let's first look at the R100 unfavourable price variance. We will allocate the price variance to each raw material kilogram, which is recorded in the different inventory related accounts. Therefore, we will need to identify in which inventory related accounts the raw material kilograms can be found to which that price variance specifically relates. Any purchased raw materials which were not sent to work-in-progress, will still be in storage and therefore still in the raw materials account.

If we look at the information, we see that 60kg of raw materials are still in storage; 6kg are in work-in-progress and 12kg in finished goods, 30kg are in cost of sales, which relates to the



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goods that have been sold. Remember that some of the kilograms are also sitting in the quantity variance account. We will use these numbers to determine the proportion of the price variance that should go to the different inventory accounts. For example, 60kg of the total kilograms purchased are still in raw materials. This translates into 60% and therefore, 60% of the price variance will be prorated to the raw materials account. The price variance was unfavourable, which means the actual costs were higher than the standard, therefore we need to increase our inventory accounts. We will process the following journal entry to allocate the price variance to the various inventory-related accounts. The journal entry will be: debit raw materials with R60, debit work-in-progress with R6, debit finished goods with R12 and debit cost of sales with R30. Credit raw materials usage variance with R8 and credit raw materials price variance with R100.

Let's allocate the raw material usage variance of R80. Remember that we allocated R8 of the price variance to the usage variance and therefore, our balance is now at R88.

The raw materials usage variance is caused by using a different amount of raw materials in the production process, than indicated in the estimated or standard amount. In this case, the usage variance is favourable, meaning we used less than originally expected. We need to decrease our inventory accounts to get back to actual costs. Here, we are using the standard kilograms, 8 units were started and the standard quantity per unit was 6kg. This equates to a total of 48kg. We can see that 6kg are still in work-in-progress relating to the 1 unit that's still there, and this translates into 12,5% of the total kilograms that were used. Therefore, R11 of the variance will be prorated to the work-in-progress account. The final journal entry will be: debit raw material usage variance with the R88 that's still in there, credit work-in-progress with R11, credit finished goods with R22 and credit cost of sales with R55.

After this process, the variance accounts will no longer have any balances in them as they would have been closed off either to cost of sales or to the various inventory related accounts. We can also see that after the adjustments, the inventory accounts are now recorded at actual cost.

In this video, we first looked at the recording process of our inventory transactions using standard costing. We then looked at how we would close off the temporary variance accounts during the reporting process. The next video will look specifically at the reporting of inventory using standard costing and how this relates to IFRS.

Thank you.