Guiding solution

To

Managerial Accounting

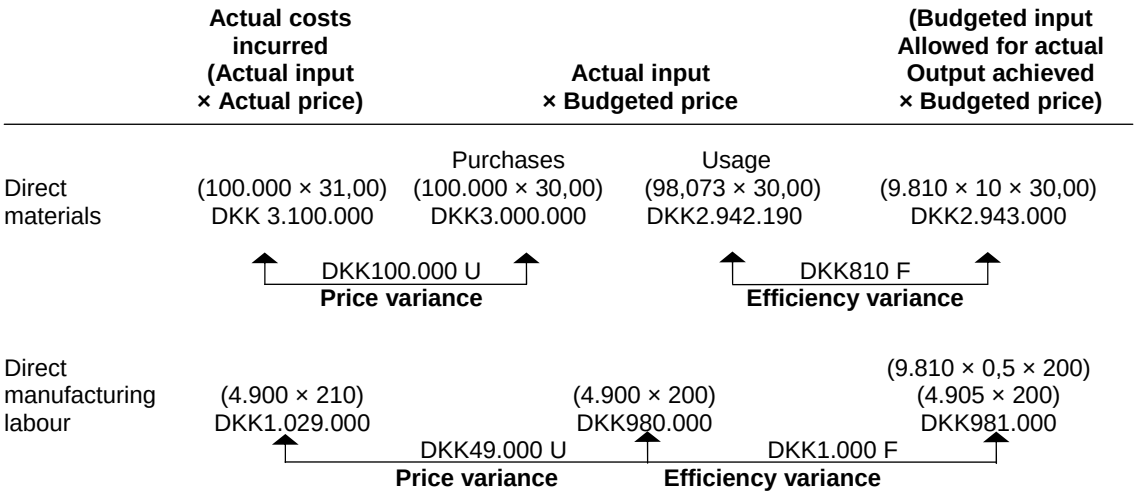
Final Exam/ Elective Course

23 June 2012

(3-hour closed book exam)

Exercise 1 (solution notes)

Question 1:



Question 2:

The purchasing point is where responsibility for price variances is found most often. The production point is where responsibility for efficiency variances is found most often. Danish Chemicals AS may calculate variances at different points in time to tie in with these different responsibility areas.

Exercise 2 (solution notes)

Question 1:

$$\text{Budgeted MOH rate in 2011} = \frac{\text{DKK2.108.000}}{\text{200.000 units}}$$

= DKK10,54 per 1 Kg unit of cake

	Citronmåne		Jordbærkage		
Unit direct manufacturing cost					
Direct materials	6,00		9,00		
Direct manufacturing labour	1,40	7,40	2,00	11,00	
Unit indirect manufacturing cost					
Manufacturing overhead (DKK10,54 × 1; 1)	10,54	10,54	10,54	10,54	
Unit total manufacturing cost		17,94			21,54

Question 2:

	Citronmåne		Jordbærkage	
Unit direct manufacturing cost				
Direct materials	6,00		9,00	
Direct manufacturing labour	1,40	7,40	2,00	11,00
Unit indirect manufacturing cost				
Mixing (0,40 × 5; 8)	2,00		3,20	
Cooking (1,40 × 2; 3)	2,80		4,20	
Cooling (0,20 × 3; 5)	0,60		1,00	
Creaming/icing (2.50 × 0; 3)	0,00		7,50	
Packaging (0.80 × 3; 7)	2,40	7,80	5,60	21,50
Unit total manufacturing cost		15,20		32,50

Question 3:

The unit product costs in question 1 and 2 differ in the assignment of indirect costs to individual products. The ABC system recognizes the substantial difference in usage of individual activity areas between “citronmåner” and “jordbærkager”. The existing costing system assumes equal usage of activity areas by 1 kg of citronmåne and 1 kg of jordbærkage, which is a too simplified assumption in many cases.

Question 4:

Activity-based cost numbers can be used for the following puropses:

a *Pricing decisions*. Mathilde Cakes can use the ABC data to decide preliminary prices for negotiating with its customers. Raisin cake is currently overcosted while layered carrot cake is undercosted.

b *Product emphasis*. ABC will lead to more accurate product margins. The information can be used for deciding which products to push.

c *Product design*. ABC provides a road map on how a change in product design can reduce costs. Mathilde Cakes can reduce the cost of either cake by reducing its usage of each activity.

d *Process improvements.* Improvements in how activity areas are configured will cause a reduction in the costs of products that use those activities.

e *Cost planning and flexible budgeting*. ABC provides a more refined model to forecast costs of Mathilde Cakes and to explain why actual costs differ from budgeted costs.

Exercise 3 (solution notes)

Question 1:

	Internal transfers at market prices (Method A)	Internal transfers at 110% of full costs (Method B)
Mining Division		
Revenues:		
900 × 400,000 units; 660[a] × 400,000 units	360.000,000	264.000,000
Deduct:		
Division variable costs:		
520[b] × 400,000 units	208.000,000	208.000,000
Division fixed costs:		
80[c] × 400,000 units	32.000,000	32.000,000
Division operating income	120,000,000	24.000,000
Metals Division		
Revenues:		
1500 × 400,000 units	600.000,000	600.000,000
Deduct:		
Transferred-in costs:		
900 × 400,000 units; 660 × 400,000 units	360.000,000	264.000,000
Division variable costs:		
360 × 400,000 units	144.000,000	144.000,000
Division fixed costs:		
150[e] × 400,000 units	60.000,000	60.000,000
Division operating income	36.000,000	132.000,000

[a] SEK660 = 600 × 110%.

[b] Variable cost per unit in Mining Division = Direct materials + Direct manufacturing labour + 75% of Manufacturing overhead = 120 + 160 + 75% × 320 = 520.

[c] Fixed cost per unit = 25% of Manufacturing overhead = 25% × 320 = 80.

[d] Variable cost per unit in Metals Division = Direct materials + Direct manufacturing labor + 40% of Manufacturing overhead = 60 + 200 + 40% × 250 = 360

[e] Fixed cost per unit in Metals Division = 60% of Manufacturing overhead = 60% × 250 = 150

Question 2:

Bonus paid to division managers at 1% of divisional operating income will be as follows:

	Method A (Internal transfers at market prices)	Method B (Internal transfers at 110% of full costs)
Mining Division manager's bonus (1% × 120,000,000; 1% × 24,000,000)	1.200.000	240.000
Metals Division manager's bonus (1% × 36,000,000; 1% × 132,000,000)	360.000	1.320.000

The Mining Division manager will prefer Method A (transfer at market prices) because this method gives SEK1.200.000 of bonus rather than SEK240.000 under Method B (transfers at 110% of full costs). The Metals Division manager will prefer Method B because this method gives SEK1.320.000 of bonus rather than SEK360.000 under Method A.

Question 3:

The manager of the Mining Division Christian Liljeblad will appeal to the existence of a competitive market to price transfers at market prices. Using market prices for transfers in these conditions leads to goal congruence. Division managers acting in their own best interests make decisions that are also in the best interests of the company as a whole.

Exercise 4 (solution notes)

Question 1:

A balanced scorecard is a measurement and management system that measures performance in four perspectives (financial, customer, internal and learning & growth).

Question 2:

There are several reasons for having non-financial measures in addition to financial measures. One reason is that nonfinancial measures are closer related to the tasks that people carry out in the organization and therefore easier to understand (eg. customer acquisition, customer satisfaction on time delivery, time to market, churn rates). Secondly some of the non-financial measures may help the organisation to identify to what extent it is on the right track in the future (lead indicators). Financial measures are always backward looking (lag-indicators).

Question 3:

Financial and non-financial measures may sometimes be in conflict. It should primarily be in the short run as at least the non-financial lead indicators should lead to better performance that can be measured in the financial perspective in the future. As an example on time delivery rate could be raised by delivering products that are easy to deliver on time. Sometimes it could be the least profitable products that are easy to deliver and therefore it would conflict with periodic financial measures. But there are several other examples of conflicts between financial and non-financial measures.