Student Notes

Module B (June 2013)

Workshop Outline and Learning Methodologies

Session	Methodologies	Chapters covered	Student Notes
Workshop 1			
1. Introduction	• Presentation • Group discussion		
2. Ethics in business	• Case study • Group discussion	Ch. 1	Pg. 1 – 13
3. Executive management	• Case study • Formal presentations	Ch. 2	Pg. 14 – 25
4. Management reporting	• Case study • Formal presentations	Ch. 4, 5 & 6	Pg. 26 – 39
Workshop 2			
5. Reboot	• Presentation • Group discussion		
6. Treasury operations	• Case study • Formal presentations	Ch. 8, 10 & 11	Pg. 1 - 18
7. Corporate finance	• Case study • Formal presentations	Ch. 12, 14, 15, 17 & 19	Pg. 19 - 27
8. Conclusion	• Presentation • Group discussion		

You are expected to have studied the relevant chapters of the Learning Pack and completed the pre-workshop materials thoroughly prior to attending the workshops. It is important for you to become familiar with the workshop materials as they will be raised for discussion throughout the workshops.

Please remember to bring a calculator with you to the Module B Workshops.

Treasury Operations: Pre-workshop exercise

This pre-workshop exercise consists of three separate tasks.

The first task is to measure and comment on the company's cash cycle. Since the company has a low inventory level and takes a large proportion of payments from customers in advance, the cash cycle is not straightforward, and students must give the matter some thought.

There is also insufficient information in the case study to measure all turnover periods, and students need to recognise this.

The second part of the exercise requires students to analyse cash flows of the company and assess whether it will be able to pay for HK$50 million of capital expenditures next year out of cash holdings or cash flows. The most appropriate way to do this is by analysing the statement of cash flows in the case study.

The third part of the exercise changes topic to currency risk management using forward contracts and currency options. It is a basic test of students' understanding of these financial products and how they might be used. The task includes some figures for analysis, but students should be able to provide an answer without the need for in-depth knowledge of this topic.

Part (1)

The company does not have a single cash cycle for its operations.

Inventory turnover

For the Product Sales division, where sales are for cash or by credit card, the cash cycle consists of the average turnover period for inventory, minus the average time to pay trade creditors.

However, some inventory is 'sold' to the other operating divisions, and we have to make assumptions in order to calculate the average turnover cycle for retail sales to external customers.

It is assumed that 2/3 of inventory at 31 December 2012 is held for retail sales and 1/3 is held for internal transfer. (These proportions are the relative amounts of external sales and internal transfers in 2012.) Inventory for external sales at 31 December was therefore 2/3 × HK$11 million = HK$7.3 million.

The cost of goods sold is 1/3 of the retail sales price; therefore the cost of goods sold externally in 2012 was HK$13 million (= 1/3 × HK$39 million).

This suggests that the average turnover period for inventory for external (retail) sales might be:

(7.3/13) × 365 days = 205 days.

This seems unusually high. There may be a reason why the end-of-year inventory is so high, and average inventory levels may be much lower. If this is the case, the average inventory turnover period will be shorter.

Trade payables

Although we know the amount of trade payables and accruals at 31 December, we do not know the amount of annual costs of sales. Clearly, trade payables relate to items of cost other than inventory purchases. Without a reliable figure for annual costs, we cannot calculate ean average length of time to pay suppliers.

Trade receivables

If we calculated the average time to receive payment from customers, the calculation of the turnover period would be:

(End of year trade receivables/Annual sales) × 365 days

= (26/637) × 365 days = 15 days.

However, many customers pay in advance and trade receivables relate only to credit sales. We do not know the amount of credit sales in 2012. However, an estimate of the average time that credit customers take to pay can be made from the aged receivables analysis, provided that we make assumptions about average payment times for customers within each time band. An estimate is made below.

Unpaid after:	Average time to pay (Assumed) days D	Amount at 31 December 2012 HK$ million	% of total receivables P	P × D
0 – 30 days	30	12	0.46	13.8
31 – 60 days	45	9	0.35	15.8
61 – 90 days	75	3	0.11	8.3
91 – 150 days	120	1	0.04	4.8
Over 150 days	150	1	0.04	6.0
		26	Average	48.7

(Note: It is assumed that if customers are given 30 days' credit, they will take the full credit term before paying what they owe.)

A rough estimate of the average time to pay for credit customers is therefore about 49 days.

Deposits, cash in hand and deferred revenue

The company takes a large amount of payments in advance from customers. At 31 December 2012, **deferred revenue** (HK$554 million) were the equivalent of 87% of the total sales revenue in 2012. This is an extremely high figure, suggesting that sales revenue in 2013 will be much higher than in 2012.

Credit card companies hold some credit card payments in special reserve accounts, and we can analyse the cash position and deferred revenue position at 31 December 2012 as follows:

	HK$ million
Held by credit card companies as deposits (32 + 133)	165
Cash	410
	575
Deferred revenue	554
Excess of cash and deposits over deferred revenue	21

This shows that **although the company has a large cash balance**, this is due mainly to the large amount of payments in advance that the company receives from customers.

The cash flows of Tango, and the limited amount of information available, make it difficult to provide further analysis of the cash cycle. As a final comment, it may be useful to note that the **current ratio** of the company at 31 December 2012 was 619/627 = 0.99 and the **quick ratio** was 608/627 = 0.97. This compares with a current ratio the previous year of 1.02 (562/551) and a quick ratio of 1.00 (552/551). There has been some deterioration in liquidity, but it does not seem significant.

Part (2)

The company has large amounts of money in cash and at the bank, but as explained previously, the cash and special deposits taken together are only slightly higher than the amount of deferred revenue. It would be imprudent for the company to allow its cash balances to fall below a level where cash plus deposits in reserve accounts are lower than deferred revenue.

If capital purchases are made out of cash, they should be paid for from cash generated by the business in 2013.

We can assess the ability of the company to pay for capital expenditures of HK$50 million out of cash flow in 2013 by looking at the statement of cash flows for 2012. In 2012, the company made net purchases on capital items of HK$39 million, and even after a large dividend payment, there was a cash flow surplus of HK$20 million.

However, this large surplus was due largely to an increase of HK$71 million in deferred revenue. As stated above, it would be inappropriate to use payments in advance from customers to fund capital purchases.

If we assume that there will be no change in working capital items, free cash flow is:

Profit before interest and tax + Depreciation + Interest received – Tax paid – Dividends paid.

Using 2012 figures, free cash flow = (in HK$ millions) 55 + 26 + 1 – 11 – 54 = 17.

Conclusion

Unless profits increase substantially in 2013, or unless the company reduces dividend payment substantially, it seems unlikely that to company will be able to fund HK$50 million in capital purchases out of cash flows.

The company may need to consider borrowing to finance the purchases.

This conclusion depends on the assumptions about profitability and dividend payments – and the timing of the capital purchases during 2013.

Part (3)

At the current spot rate of exchange (8.08), the purchase of goods for AUD$1 million would cost Tango HKD$8.08 million. However, the spot rate will almost certainly change in the next six months, and this creates an exposure to foreign exchange risk. If the spot rate increases above 8.08, the purchase will cost more. If the spot rate falls, it will cost less. We do not know how far or in what direction the spot rate will change.

Forward contract

Tango could fix the rate of exchange using a forward contract. The current forward rate is 8.00, and at this rate the equipment purchase would cost HK$8.0 million. This would be contractual rate, so if the spot rate fell below 8.00, Tango would still be required to buy the Australian dollars at 8.00. Similarly, if the delivery of the equipment is delayed, Tango would have to honour the contract at the contractual settlement date, although it should be possible to extend the contract to a later settlement date, although at some cost.

The main advantage of a forward rate contract is that it fixes the exchange rate and so creates certainty about cash flows. It also ensures that the exchange rate will not be worse than the rate fixed by the forward contract.

The main disadvantage of a forward contract is that if the spot rate moves in Tango's favour, below 8.00, the company would be unable to benefit from this favourable movement.

Currency option

Tango could buy a currency option, giving it the right (but not the obligation) to buy AUD 1 million in six months' time at a strike rate of 8.00. This has the advantage of fixing the worst possible exchange rate for the purchase of the Australian dollars at HK$8.0 million. In addition, if the exchange rate moves more favourably, Tango can let the option lapse and buy the Australian dollars at the available spot rate.

The main disadvantage of an option is its cost. This option would cost HK$60,000. To make the option worthwhile, in comparison with a forward contract at a fixed rate of 8.00, the spot rate would need to fall below 8.00 by at least (60,000/1,000,000) or 0.06.

If the spot rate at expiry of the option is 8.00 – 0.06 = 7.94, Tango would exercise the option and buy AUD1 million at a cost of HK$7,940,000. Adding the cost of the option ($60,000), the total cost for Tango would be HK$8,000,000. This is the cost that would be obtained using a forward contract.

The spot rate would therefore need to fall below 7.94 before the currency option becomes a better alternative than the forward contract.

The decision whether to hedge the currency risk exposure, and if so whether to use a forward contract or an option, depends on the attitudes to risk of Tango management, and expectations about changes in the spot rate over the next six months.

Treasury Operations: Case 1

Jenny Kwok is making a review of working capital management, including cash management and dividend policy. She is working with the company treasurer Danny Lin, and exchanging views and ideas on a number of different issues.

They are reviewing four areas of policy.

You should divide into four groups to discuss each of the following four requirements. **You should refer to the information in the case study and the pre-workshop exercise** as well as the additional information provided below.

Case A (Inventory management)

Inventory costs are a small percentage of Tango's total operating costs and for this reason inventory has been largely ignored in the past. Jenny Kwok and Danny Lin agree that there may be some opportunities for improving efficiency in inventory management.

They have established the following information.

(1) The company stocks a wide range of beauty and health products.

(2) About two-thirds of products are sold externally through the retail outlets and about one-third of products are transferred internally from the Product Sales division to the other three divisions.

(3) Most inventory is held in the Product Sales division, but some products transferred from this division are held in the Beauty and Facial clinics and treatment centres.

(4) Some product items sell very quickly and have rapid turnover. Other product items are slow-moving.

In view of rising demand from customers for retail sales, and limited supplies of products from France, Tango is considering whether to start buying and using additional products sourced from Japan. If this were to happen, it is likely that all products sourced from Japan would be sold externally through the retail outlets, and would not be used internally by any of the company's clinics, spas or centres.

Required

(a) Explain the reasons why it is advisable for Tango to control its inventory, even though inventory costs are only a small percentage of total costs.

(b) Suggest ways in which the company might reduce costs of inventory.

Case B (Cash management and dividends)

Although Tango has large amounts of cash on deposit, interest income during 2012 was very low. In addition bank charges are unacceptably high. Jenny Kwok and Danny agree that measures must be taken to improve cash management.

Some cash is held in special reserve deposits by credit card companies, as security for the eventual performance of services for which customers have already paid by credit card. No interest is receivable on these reserve account deposits. The company also has substantial additional amounts of cash on deposit with banks in Hong Kong, Singapore and mainland China.

Both the CEO (Nigel Yip) and the Chairman (David Chan) argue that the large amounts of cash held by the company justify the company's policy of paying out a large proportion of annual profits in dividends each year. Jenny Kwok has argued that the company should consider a policy of lower dividends in the future, in order to improve the working capital position of the company.

Required

(a) **Comment on the low interest income and high bank charges in 2012, and recommend measures that the company should take to improve the situation.**

(b) **Explain the benefits and disadvantages of holding cash in a number of different currencies, and suggest whether the current policy of Tango, to hold cash in several different currencies, is appropriate.**

(c) **Comment on the suggestion by Jenny Kwok that in future, dividend payments should be reduced in order to improve the company's working capital position.**

Case C (Creditors and payments)

The company is considering whether to add to the range of beauty and health products that it sells by purchasing products for resale from Japan, in addition to the purchases from France that it already makes. The products sourced from Japan, unlike products purchased from France, would be packaged and sold under Tango's own logo and brand name. Danny Lin is concerned about the effect such a new policy would have on inventory levels and trade creditors.

Jenny Kwok disagrees. She argues that creditors for inventory supplies are small, but she also argues that the company takes far too much credit and this has a damaging effect on the reputation of the company with its suppliers. "We pay most of our creditors at the latest possible time," she says, "but with one notable exception. I don't understand why we pay rental costs on our accommodation so much in advance."

Jenny and Danny are in agreement about payments in advance by customers. Both are concerned about the effects on the company of a change in customer attitudes. They have both heard stories within the industry that other smaller beauty treatment companies and health and fitness centres are facing strong reluctance by customers to pay in advance. Instead, customers are increasingly expecting to pay at the time they receive their treatment or service benefit. The effect of a similar change of attitude by Tango's customers could have serious implications for cash flow and working capital.

Required

(a) Explain the likely effects on trade creditors of a decision by the company to increase total purchases by adding to its product range and buying additional products from Japan.

(b) Comment on the company's policies with respect to trade creditors and prepayments.

(c) Assess the likely effect on the company's cash flows and funding of a substantial fall in payments in advance by customers and an increase in payments-on-delivery.

Case D (Accounts receivable)

Danny Lin admits that there are problems with obtaining payments of accounts receivable. A number of Tango's customers have suffered from the general global economic slowdown, and Danny has been giving customers more time to pay the money that they owe. He argues that by giving longer credit, customers do pay eventually and so far Tango has not written off any amounts receivable as uncollectable.

Jenny Kwok wants to review and revise this policy. She believes that customers should be required to honour the terms of their credit arrangements and the company should have more robust collection procedures. She comments that although Tango has not yet written off any amounts receivable as uncollectable, she can predict, from a study of the aged receivables report, that debt write-offs will happen in the near future.

Danny disagrees. He argues that if the company takes stronger action to obtain payments from customers, many customers will stop buying from the company and the company will also suffer from higher bad debts.

Required

Give your views about the respective views of Danny Lin and Jenny Kwok. Recommend a policy that the company should adopt for the management of receivables.

Treasury Operations: Case 1

Case A

Key learning points

- To apply general principles of working capital management to a specific case study. In this example, the company has only very small quantities of inventory, since it is mainly a services business.
- Even when inventory is not a significant item in the balance sheet, they must be able to analyse inventory figures and identify weaknesses in inventory management.
- There is a connection between excessive inventory levels and losses due to deterioration, of items held in inventory. There should be control over materials purchasing, storage of materials and materials usage. Even small savings affect profitability.

(a) It has been established that on the basis of the information provided, Tango has a long average inventory turnover period, although the turnover period that has been estimated may be affected by an abnormally high level of inventory at the year end.

Management should monitor inventory turnover, because slow turnover indicates that the company is buying and holding too much inventory, or that it is not using or selling inventory as quickly as expected. This would be evidence of inefficient operational management.

There are other reasons why management should control inventory storage and turnover.

(1) Tango is planning to increase its product range by purchasing goods from Japan. This means that extra space will be needed for storage of inventory. Keeping inventory at an efficient operating level will help to limit the costs of storage. For example, by reducing inventory of products purchased from France, it may be possible to hold inventory of products purchased from Japan without the need to obtain and operate additional storage space.

(2) Some products deteriorate after a time, and may be thrown away if they are not used within a given time. Similarly, some products may be damaged by handling or storage, and written down in value or written off.

Although Tango purchases a small amount of products in relation to its total costs, higher storage costs and higher costs of stock deterioration and write off will affect profitability adversely. Efficient inventory management should reduce the losses. As the volume of retail sales increases in the future, the benefits of efficient inventory management should increase further.

(b) **Opportunities for reducing costs of inventory** are as follows.

(1) The Sales and Product division should reduce the amount of storage space required for holding inventory with a view to making more productive use of the space. As indicated above, if the company purchases additional products from Japan, costs can be reduced from what they would otherwise be by making better use of space. One way of doing this is to purchase products in smaller quantities and more regularly. Smaller purchase quantities would be desirable provided that this did not lead to higher purchase prices (due to loss of bulk purchase discounts) or higher ordering and delivery costs.

(2) For products that deteriorate over time, and are at risk of being thrown away unused, management should monitor purchases and usage closely. Consideration should be given to stopping all purchases and use of slow-moving items. The costs of inventory write-offs should be charged to the division or divisions that are considered responsible and should not necessarily be a cost to the Product Sales division.

Where the operating divisions use some products irregularly, so that inventory turnover is slow, they should be charged with the cost of inventory written off. This should act as an incentive to divisional management either to use the products more regularly or to decide that they no longer want to use the product at all.

Case B

Key learning points

- To identify the **weaknesses in the company's cash management**. The company has a large amount of cash, but it is earning only a small amount of interest and bank charges are high.
- Cash is held in different currencies, and the company has a policy of high dividend pay-outs.

(a) Tango appears to have managed its cash inefficiently, a failing for which Danny Lin (and Jenny Kwok) should be accountable. The company held HK$410 million in cash and bank deposits on 31 December 2012 and HK$390 million one year previously. This suggests that average cash holdings are about HK$400 million. Interest income in 2012 was HK$1 million. Although some cash must be held in non-interest-earning current accounts, this nevertheless suggests that the average rate of interest receivable on deposits was about 0.25% ($1 million/$400 million). This is low. The company could improve profits simply by making more profitable use of its cash.

In addition, the company has high bank charges. These were HK$30 million in 2012. This cost represents nearly 5% of total revenue or 7.5% of average cash and bank holdings. This is much too high, even allowing for the fact that the company may make a large number of money transfers between different countries and in a range of different currencies.

The immediate first measure that Danny Lin should take is to identify which banks hold most of Tango's cash and where most of the bank charges are incurred. He should then communicate with the relevant relationship officer at each of the banks that have been identified, and state that unless the bank pays better interest or reduces its charges, Tango will consider moving its business to another bank.

He should also contact other banks and ask them about rates that they will offer on deposits and charges that they will make for transactions.

It is highly probable that these initial measures will result in some improvements.

For the longer term, Tango should consider holding liquid marketable investments instead of holding cash in deposit accounts, in order to earn more income. If the company wishes to avoid investment risk, it can purchase and hold secure investments such as short-dated government bonds.

Tango should also study ways of reducing bank charges. This may be possible by means of:

- Reducing the number banks that it uses for transactions

- Reducing the number of banking transactions
- Using cheaper methods of transferring money than the methods that are currently used.

(b) There are several benefits of holding cash in several currencies, particularly when the company has foreign/international operations and business transactions.

(1) Foreign business transactions create exposures to currency risk. One way of hedging this risk is to hold cash in currencies in which it will have net payments in the future.

(2) When a company has operations in other countries, it is essential to have some cash holdings in the currency of that country, to meet day-to-day cash flow needs. Tango should therefore hold some cash in Singapore in Singapore dollars, and should hold some cash in mainland China in yuan (renminbi).

(3) If the company believes that its domestic currency will depreciate in value against other currencies, holding cash in those currencies will provide an opportunity to profit, provided that the prediction about exchange rate movements proves correct. This should only be a permitted tactic, however, if Tango considers its treasury department (and Danny Lin in particular) to be sufficiently experienced and skilful in managing currencies and currency risk.

(4) Tango presumably has substantial amounts of deferred revenue denominated in yuan/renminbi and Singapore dollars. In order to hedge exposures to currency risk, Tango should hold at least as much cash in each currency as it has deferred revenue in the currency.

There are also disadvantages in holding cash in different currencies.

(1) Tango is holding about 20% of its cash in Singapore dollars (the equivalent of about HK$80 million) and 20% of its cash in renminbi. These amounts are probably in excess of what Tango probably needs for operational expenditure purposes and to set against deferred revenue. Tango is also holding about 5% of its cash (the equivalent of HK$20 million) in euros, even though its annual expenditures in euros in the whole of 2012 (purchases from France) were HK$19 million. This suggests that Tango is holding different currencies for speculative purposes rather than operational purposes. Unless the company believes that the Hong Kong dollar will fall in value in the future, this seems an inappropriate strategy, because opportunities to profit from exchange rate movements could be small.

(2) By holding cash with different banks in different countries, Tango may be earning less in deposit interest than it would if it were to concentrate its cash in larger deposits with a smaller number of banks. The foreign currency cash transfers may also help to explain the company's high bank charges.

(c) Lower dividend payments would mean higher retained profits and more cash. Unless the cash is used for other purposes, such as capital expenditure, the effect would be to increase working capital by increasing cash holdings. It is more likely, however, that the cash would be used to invest, possibly in capital equipment.

At the moment the company pays most of its profits in dividends to shareholders. If this is a long-term policy, it will create uncertainty for shareholders, because annual profits may fall (as they did in 2012) as well as rise, and shareholders may therefore suffer dividend reductions from one year to the next. Volatility in dividend payments could affect the share price.

Since profits were lower in 2012 than in 2011, a lower final dividend payment in 2013 should be expected, compared with 2012. (In 2012 dividend payments resulted in a reduction in retained profits by HK$9 million.)

The suggestion by Jenny Kwok, that dividend payments as a percentage of profits should be reduced, may have long-term validity. However in the short term would be probably result in objections from shareholders – and a fall in the share price. David Chan, the chairman of the board of directors, who is also a major shareholder, is unlikely to support Jenny Kwok's proposal.

Case C

Key learning points

- When end-of-year values (in this example, for prepayments) are used to measure working capital ratios, the ratio will be misleading of the end-of-year value is not representative of the normal value throughout the year.

(a) If Tango buys a new range of products from suppliers in Japan, its trade creditors will increase. For example, if Tango buys goods from Japan with an equivalent cost of HK$12 million each year, and is able to get two months' credit from suppliers, its trade creditors will increase by HK$2 million.

Total annual purchases of new products are unlikely to be significantly higher than this figure, and the increase in trade payables will not be significant in comparison with its end-of-year total of HK$61 million for trade payables and accruals.

(b) With the limited available information, we cannot analyse the trade payables and accruals numerically. However, Jenny Kwok admits that the company takes as much credit from its various suppliers as it can. This is an inadvisable policy.

(1) By taking longer to pay than it has agreed contractually with suppliers, Tango will damage its reputation with suppliers. Some suppliers may be reluctant to continue selling to the company, and may look for other customers who are more reliable with payments.

(2) Suppliers may also be reluctant to collaborate with Tango in business initiatives. For example, Tango plans to purchase goods from Japanese suppliers that are packaged under the Tango brand name. If Tango does not pay these suppliers according to the agreed credit terms, the suppliers may become reluctant to package their products in this way.

(3) Small suppliers may have cash flow difficulties, and late payments by Tango could damage their financial position to the point where they are forced out of business.

(4) Taking longer to pay than agreed with suppliers is also unethical business practice.

Tango takes a completely different approach with **rental payments**. At 31 December 2012, there were prepayments of rent amounting to HK$71 million. The total occupancy costs of the company in 2012 were HK$102 million. Even if we assume that all occupancy costs are rental payments (which is not the case), and if we assume that the end-of-year prepayments figure is the typical average value, the **average prepayment of rentals** would be:

(71/102) × 365 days = 254 days (= over 8 months).

Since some occupancy costs are not rental costs, the average prepayment period for rent will be longer than this.

This might suggest that the company pays rental in advance on all or most of its rented properties, possibly one year in advance.

As Jenny Kwok has commented, this is a totally different approach to payments than the company's treatment of other suppliers.

(c) If there is a reduction in the number of customers who pay in advance, and a corresponding increase in the number of customers who pay 'on delivery', Tango will be affected as follows.

(1) There will be a reduction in total deposits in special reserve accounts and in cash.

(2) There will be a matching reduction in deferred revenue.

(3) If it is company policy to hold sufficient cash to cover its deferred revenue liabilities, the company's liquidity should not be affected, although there will be some change in the current ratio and quick ratio.

(4) Tango does not invest its cash to earn significant amounts of interest. In principle, however, a fall in the amount of cash holdings should result in a fall in interest income.

In summary, Tango should not be significantly affected by a reduction in the number of customers who pay in advance.

Case D

Key learning points

- To specify procedures or policy for the efficient collection of trade receivables. Students should understand the arguments about the effect on sales revenues and bad debts of allowing extended credit to customers. In this example, students should recognise that the suggestions of the treasurer, Danny Lin, are not valid. His arguments are perhaps a cover to hide the inefficiency in collection of trade receivables.

It is generally considered that by giving longer credit terms to customers, a company is likely to incur higher bad debts (and higher financing costs for trade receivables), but that sales volumes will increase because customers will be attracted by the more generous credit terms.

The argument of Danny Lin, that allowing customers a longer time to pay will reduce bad debt costs, is inconsistent with this generally-established view. Jenny Kwok is probably correct in her belief that although Tango has not yet written off any amount receivable as uncollectable, this may happen soon. Already there are HK$1 million of receivables that are unpaid more than 150 days after the invoice date, and another HK$1 million that are unpaid after 120 days.

A second important consideration is that the decision to offer a longer credit period to customers should come from the company. A long average collection period (estimated previously at about 49 days on average) is the result of decisions by customers not to pay on time and failure by Tango to chase late payers for the money that they owe. Danny Lin seems to be arguing in favour of longer credit terms when he should be accepting responsibility for inefficient collection of receivables.

The following policy for receivables is recommended.

(1) The company should decide on its credit policy and have a clear policy about the credit terms that it is prepared to offer to particular types of customer.

(2) Customers who ask for credit should agree to the company's credit terms and credit limits.

(3) Initially, collecting money from customers may be the responsibility of administration staff at individual clinics and centres. If so, they should be trained in collection procedures, and should be supported by computer-produced documentation for sending to customers, such as statements and reminder letters.

(4) There should be a clear policy for referring late payers to a centralised collections team. There may be a collections team in each country in which Tango operates. These should have established procedures for chasing late payers. There should also be a policy for the eventual transfer of unpaid receivables to a debt collection agency.

(5) Management should receive monthly aged receivables reports and monitor the collection activities of administrative staff. Centre management and divisional management should be held accountable for performance in collecting receivables.

Treasury Operations: Case 2

Tango's treasurer, Danny Lin, is interested in risks and opportunities created by operating or funding in foreign currency. He is aware that the company may decide to expand operations in mainland China, and may seek an acquisition in Malaysia or South Korea. He has also discussed the possibility that the company will start to buy products for resale from Japan, in addition to purchases from France (the euro zone). Tango is gradually expanding to become a global business. As a global business, Danny believes that Tango should give much greater attention to the management of foreign currency risk exposures.

If Tango pursues a strategy of international expansion in the future, it seems certain that the cost of expansion will be funded by debt capital instead of, or in addition to, equity funding. Danny sees this as an excellent opportunity to benefit from very low rates of interest available on debt finance in euros. Borrowing costs could be up to 100 basis points i.e. 1% less if the company borrows euros instead of Hong Kong dollars.

He is planning to make a presentation of the issues to his boss, Jenny Kwok, the Chief Finance Officer.

Required

(a) Explain the nature and scale of the company's current exposures to foreign currency risks in:

(1) renminbi and Singapore dollars
(2) euros

Similarly, explain the nature and scale of the company's current exposures to foreign currency risks in:

(3) Malaysian ringgit or South Korean won
(4) Japanese yen.

(b) Set out the implications for Tango of borrowing in euros in order to finance expansion of the company's business into Malaysia or South Korea.

Treasury Operations: Case 2

Key learning points

- To identify the foreign currency risk exposures of a company such as Tango that has business operations in other currencies, and which sources some materials from other countries.
- To analyse the possible benefits and risks of borrowing in a foreign currency in order to obtain a lower interest rate on the debt.

Part (a)

Remnbinbi/yuan and Singapore dollars

Tango has established businesses in mainland China and Singapore; therefore it has assets in the local currencies. From the statement of financial position in the case study, it would appear that the company's assets in these currencies consist of some fixed assets, deposits in special reserve accounts, some trade receivables and prepayments, and cash. Tango has large holdings of cash in renminbi/yuan and Singapore dollars. To the extent that these assets are not matched by liabilities in the same currency, Tango is exposed to a fall in the value of these currencies against the Hong Kong dollar. If these currencies fall in value, their value when translated into Hong Kong dollars will fall.

However it would also appear that Tango has large amounts of liabilities in these currencies, in the form of payments in advance by customers. The net asset exposure to foreign currency risk is the total of assets in those currencies minus the amount of these liabilities. We do not know what the actual amounts are, but the net exposure may not be large. If this is the case, the exposure to currency risk will be small.

In addition, the company is earning revenues and profits from its operations in these countries, and if the renminbi or the Singapore dollar falls in value against the Hong Kong dollar, this will adversely affect the Hong Kong dollar valuation of profits, and also the amount of cash that may be converted into Hong Kong dollars for transfer to head office.

Currency risk is a two-way risk. Although the company is exposed to the risk of a fall in the value of the renminbi and the Singapore dollar against the Hong Kong dollar, it will also gain from any strengthening of these currencies.

Euros

Tango buys products from France. This means that over time, the company will benefit from a fall in the value of the euro against the Hong Kong dollar, because this would reduce the HKD cost of purchases, but the company would have to pay more for its purchases if the euro strengthens in value.

However, we know that Tango holds a substantial amount of cash (about 5% of its cash or about the equivalent of HK$20 million) in euros. Since it holds assets in euros, in the short term the company is exposed to a fall in the value of the euro, because this would reduce the HK$-equivalent value of its euro cash.

Malaysia ringitt or South Korea won

A similar analysis applies to new investments in Malaysia or South Korea as it does to the existing investments in mainland China and Singapore. Investing in these countries will be financed in Hong

Kong dollars (or possibly euros or US dollars) and Tango will be exposed to a fall in the value of these currencies against the Hong Kong dollar.

The scale of the exposure will not be large if the amount of the initial investment in either of these countries is small.

Japanese yen

If Tango buys products regularly from Japan, it will be exposed over time to the risk of a rise in the value of the yen against the Hong Kong dollar. The scale of this exposure will depend on the amount if its purchases.

Conclusion

Currency risk is higher when an exchange rate is volatile, so that rates of exchange may rise or fall by large amounts, and it is difficult to predict the direction or the size of any future rate change. Tango may have a view about the relative stability of exchange rates for the Hong Kong dollar against other currencies. If management take the view that exchange rates will be fairly stable, and will not be volatile their attitude may be that currency risk is not significant and measures to limit or manage the risk in general are not necessary.

Measures to hedge currency risk exposures may be restricted to transactions where the risk is unusually high, and where a large change in the exchange rate may possibly occur. This would be a policy of ‘selective hedging’.

Part (b)

The currency risk

If the company borrows in euros, it will have a foreign currency liability which must eventually be repaid, and also regular interest payments in foreign currency.

It will need to make the interest payments by purchasing euros with Hong Kong dollars, or possibly with ringgit or won. This will create an exposure to the risk of a rise in the exchange value of the euro. Similarly it will have to repay the borrowed money eventually, with Hong Kong dollars (or possibly with ringgit or won).

The company will also have a translation exposure because of its liabilities in euros. If the liability currency increases in value against the Hong Kong dollar, Tango’s reported liabilities in Hong Kong dollars will increase.

The cash flow benefits or costs

The purpose of borrowing in euros would be to obtain a lower interest rate on the cost of borrowing. Management should consider the implications for cash flows of an adverse movement in the exchange rate, and a stronger euro.

Suppose that the current exchange rate is HKD10 = EUR1. If Tango wanted to borrow HK$40 million to invest in Malaysia, it could borrow EUR4 million in euros. The interest rate might be 5%, and annual interest payments (assuming ‘bullet repayment of the borrowed money at maturity) would be EUR200,000. At the current exchange rate, this would be equivalent to HK$2,000,000

If Tango borrowed the money in HK dollars, it would borrow at 6% (100 basis points higher) and annual interest costs would be HK$2,400,000.

This suggests that the company would benefit from borrowing in euros in order to reduce interest costs.

However, if the euro were to strengthen against the Hong Kong dollar, say to HKD11 = EUR1, annual interest payments on the borrowed money would increase to HK$2,200,000. More significantly, the eventual repayment of the debt would cost HK$44,000,000.

These illustrative figures show that there would be some risk in borrowing in euros, but **the benefit or disadvantage from borrowing in euros will depend on the exchange rate between the euro and the Hong Kong dollar**.

Corporate Finance: Pre- workshop exercise

Part 1

Workings

Revenue				Running costs		Net operational cash flow
Year	Hours of use	Revenue at current prices	Revenue after inflation at 3%	At current price levels	Allowing for inflation at 5%	
		HK$	HK$	HK$	HK$	HK$
1	600	600,000	618,000	120,000	126,000	492,000
2	1,000	1,000,000	1,060,900	120,000	132,300	928,600
3	1,200	1,200,000	1,311,272	120,000	138,915	1,172,357
4	600	600,000	675,305	120,000	145,861	529,444

Tax relief on the cost of the equipment will be HK$450,000 in each year, so the benefit from tax reduction each year will be HK$450,000 × 16.5% = HK$74,250.

NPV calculation

Year	Net operational cash flow	Tax at 16.5%	Net operational cash flow after tax	Tax benefit on equipment purchase	Equipment	Net cash flow	DCF factor at 9%	PV of net cash flow
	HK$	HK$	HK$	HK$	HK$	HK$		HK$
0					(2,000,000)	(2,000,000)	1.000	(2,000,000)
1	492,000	(81,180)	410,820	74,250		485,070	0.917	445,018
2	928,600	(153,219)	775,381	74,250		849,631	0.842	715,389
3	1,172,357	(193,439)	978,918	74,250		1,053,168	0.772	813,046
4	529,444	(87,358)	442,086	74,250	200,000	716,336	0.708	507,166
								480,619

Net present value

The NPV is positive, indicating that the investment will earn a discounted return in excess of 9%, and (ignoring all other financial and non-financial factors) should be undertaken.

Part 2: Sensitivity analysis

Revenue

Year	Revenue after inflation at 3%	Tax at 16.5%	Revenue after tax	Discount factor at 9%	PV of revenue after tax
	HK$	HK$	HK$		HK$
1	618,000	101,970	516,030	0.917	473,200
2	1,060,900	175,049	885,851	0.842	745,887
3	1,311,272	216,360	1,094,912	0.772	845,272
4	675,305	111,425	563,880	0.708	399,227
					2,463,586

The project NPV is HK$480,619. The project NPV will cease to be positive if the net revenue from the project after tax is more than HK$480,619 below estimate.

In other words, the project will cease to be financially viable if revenue is more than 19.5% (480,619/2,463,586) below estimate. Revenues may be lower than estimate either because the hours of equipment use are less than expected each year or the revenue per hour is less than expected.

These calculations assume that the shortfall in revenue would be a constant percentage amount in each year.

Part 3

If the company is considering the purchase of 10 units of the equipment over a two-year period it could review its decision to purchase when it knows whether its revenue estimates are accurate for the first one or two units. If the usage of the equipment is much less than expected, the company can abandon its plans to purchase the remaining units.

(However, depending on the terms of the purchase agreement with the equipment supplier, there may be a cancellation charge if Tango decides not to buy all 10 units of the equipment.)

Part 4

If Jenny Kwok has strong views about the purchase of this equipment, these may affect her attitude to the financial estimates. For example, she may accept optimistic estimates of the usage of the equipment or the revenue per hour they will produce.

The behavioural tendency is to make the figures support a pre-conceived opinion.

Corporate Finance: Case 1

The board of directors is concerned about the lack of profitability in the Slimming and Fitness division and has asked for a report from the accounts and finance department on the financial implications of three options for business reorganisation that are under consideration.

(1) **Option 1**. Split Tango into two separate companies, with the Slimming and Fitness (Slimfit) division established as a separate company, Newco Limited. The two companies would initially continue to share the same head office accommodation in Hong Kong.

(2) **Option 2**. Spin off the Slimming and Fitness division by selling it to a management buyout team. A group of centre managers in the division has expressed strong interest in establishing a company to buy the division from Tango.

(3) **Option 3**. Reduce the number of slimming and fitness centres, or possibly close down all of them, and use the space to open new beauty treatment clinics.

You may use relevant information in the case study or in earlier exercises to support your arguments.

Required

Set out the financial implications for each of these three options, indicating which financial factors are particularly important and should be considered by the board in reaching a decision about which option, if any, to select.

If you can identify a more suitable option for dealing with the Slimming and Fitness division, you should include this in your answer.

Corporate Finance: Case 1

This exercise looks at various proposals for the reorganisation/restructuring of the company in response to the deteriorating performance of the Slimming and Fitness (Slimfit) division, which suffered a large fall in sales revenue in 2012 and only just achieved break even. Prospects for the future may be even worse.

Introduction

Tango currently has 50 million shares in issue, valued at HK$12.20 each. The total market capitalisation of the company is therefore HK$610 million. This is quite small for a Main Board company. My analysis of the options that have been proposed for the Slimming and Fitness division are based on the assumption that the board of directors should be looking for a strategy that will achieve **growth** in Tango's business sand valuation in the future.

Option 1

Splitting Tango into two separate companies would be inappropriate for several reasons, and should not be the chosen strategy option.

(a) Newco would be a small company without a trading record. It would be too small to consider a GEM listing in the future, and it would have to be a private company. Shareholders in Tango would be given shares in Newco, but the value of these shares would be uncertain and there would be no secondary market in which the shares could be traded. For investors, these Newco shares would almost certainly be of little value.

(b) The Slimming and Fitness division is unlikely to be very profitable, and might even be loss-making. Revenue fell by 35% in 2012 compared with 2011 and if the decline in revenue continues, it seems probable that Newco would make losses in the future and may soon become insolvent.

(c) To give Newco a chance of surviving, it would probably be necessary to transfer some cash into the company from Tango, in excess of the cash needed to cover prepayments by customers. Shareholders may object to the transfer of cash to a company that they believe may soon become insolvent.

(d) Customers of the Slimming and Fitness division may possibly cancel their existing bookings when they learn what is happening to the business.

(e) The Slimming and Fitness division made no profit but no loss in 2012, after a head office charge of HK$4 million. It is unlikely that Tango would save these head office costs if Newco is established. If the decline in revenues for the Slimming and Fitness division can be halted (or even turned round) in 2013, the division may still contribute to Tango profits and cash flows. The profits and cash flows of Tango may therefore be adversely affected by a separation of the business into two companies.

In summary, this option should be dismissed as damaging to the interests of both shareholders and customers.

Option 2

In principle, a management buyout of the Slimming and Fitness division might have some advantages. Tango could sell the business and use the sale proceeds to invest in the other parts of its business, where profitability may be higher. The management team that has shown an interest in a buyout will know the business well and may be able to run it at a profit.

However, there are several problems with the management buyout (MBO) proposal.

(1) The offer price for the business may be low. If a low price is accepted, Tango will have little extra money to invest in its other operations.

(2) Even if a sale price can be agreed that is acceptable to Tango, the management buyout team may have difficulty in raising funds to make the payment. Tango should not accept deferred payment terms for any sale of the business, in view of the uncertainty about its future financial viability.

(3) The Slimming and Finance division operates in three countries. The management buyout team may be unwilling to take over the business outside Hong Kong. This would leave Tango management with the problem of deciding what to do with the parts of the business that they cannot sell.

(4) As suggested in the comments on Option 1, loss of the Slimming and Fitness division could lead to a fall in profits and cash flows for the rest of Tango's business, and so a further fall in the share price.

My recommendation is that this Option should be rejected unless a reasonable sale price can be agreed for a MBO

Option 3

Tango should be looking for ways to grow its business by improving revenues and profits. It is possible that an internal restructuring of the business, and a switch of resources from Slimming and Fitness centres to Beauty and Facial clinics may provide growth opportunities.

There may be potential for further growth in the Beauty and Facial clinics business. In 2012, revenue for the division was HK$470 million, compared with HK$425 million in 2011 – an increase of over 10%. It may be possible to use existing accommodation in Slimming and Fitness centres for new beauty clinics, but management would need to consider whether the Slimming and Fitness centres are in suitable locations and could be converted into beauty clinics. Management would also need to consider whether Tango should seek to grow its beauty and facial business by opening new clinics, or whether it would be preferable to expand the capacity of existing clinics.

Closing slimming and fitness centres and converting them into beauty clinics would have implications for redundancies among slimming and fitness specialist staff, and Tango management should consider what the costs might be.

In summary, Option 3 may be an appropriate strategy for the future, because it would represent an attempt to reorganise the business and focus resources on the most profitable operations. However, there is insufficient information to judge whether Option 3 would be practicable, and further investigation is recommended.

Other options

Other options could be considered. These might include selling the Slimming and Fitness division to a competitor company, if a higher price could be obtained than for a management buyout.

A high-risk option would be to look for another slimming and fitness company to acquire. By creating a bigger business, it may be possible to improve revenues and profitability.

A more cautious option would be to investigate the profitability of each individual slimming and fitness centre, and identify those that are still financially viable and those that are not adding value.

The poor-performing centres should be closed down. Those that continue to add value should be kept open.

Corporate Finance: Case 2

Tango currently has no debt capital in its capital structure. The board is considering a proposal that the company should change its capital structure to include a substantial amount of debt. The company would issue sufficient debt capital in the form of long-term bonds, at an interest rate of 4%, to buy back and cancel 25% of its shares.

It has been widely assumed that most of the operating costs of Tango are fixed costs, but a recent study by the company's management accountant indicates that about 10% of total operating costs are variable costs.

There are some doubts about whether investors would support such a major change, but before making a judgement on this matter, the board wants to know the financial implications of the proposal. The board considers that all the shares that are repurchased and cancelled can be repurchased at the current market price. It is also aware, however, that if Tango takes on a large amount of debt capital, this could affect its business reputation, and sales revenue might fall by as much as 1% per year as a consequence.

Required

Using the information in the case study, and making any other assumptions that you consider necessary, you are required to assess the effects on:

(a) financial gearing and operational gearing, and

(b) earnings per share and the company's equity value

as a result of the proposed change in capital structure.

In your calculations, you should assume that the rate of taxation on all profits is 16.5%.

Corporate Finance: Case 2

If Tango buys back 25% of its 50 million shares at a price of HK$12.20, the total cost of the repurchases would be 12.5 million × $12.20 = HK$152,500,000.

Tango would therefore have to issue bonds to raise HK$152.5 million plus the costs of the bond issue (which are ignored in this analysis). It is assumed that Tango will be able to issue 4% bonds at par, and the annual interest cost will therefore be HK6,100,000.

It is also assumed, for the purpose of this analysis, that by taking on debt, Tango will suffer adverse reaction from customers, and annual sales will be lower by 1%.

The effect of these changes is analysed in the table below, assuming that they can be applied to the company's actual results in 2012.

	Without a bond issue and share buy-back		*With the bond issue and share buy-back*
	HK$000		HK$000
Revenue	637,000	(× 99%)	630,630
Variable costs (10% of total operating costs)	58,200	(× 99%)	57,618
Contribution	578,800		573,012
Fixed costs (90% of total operating costs)	523,800		523,800
Operating profit	55,000		49,212
Interest income	1,000		1,000
Interest cost	0		(6,100)
Profit before taxation	56,000		44,112
Tax at 16.5%	9,240		7,278
Profit after taxation (earnings)	46,760		36,834
Number of shares	50 million		37.5 million
Earnings per share	HK$0.935		HK$0.982

(Profit after taxation without a bond issue differs from the actual profit after tax in 2012 because a standard tax rate of 16.5% has been applied to all profits.)

	Without a bond issue and share buy-back	*With the bond issue and share buy-back*
Operational gearing		
Contribution/Operating profit	578,800/55,000 = 10.5	573,012/49,212 = 11.6
Financial gearing: market values	0/(0 + 610,000)	152,500/(152,500 + 457,500)
(Market value of shares = $12.20)	= 0%	= 25%
Financial gearing: book values	0/(0 + 240,000)	152,500/(152,500 + 87,500)
(Equity after share buy-back = 240,000 – 152,500) = 87,500	= 0%	= 63.5%

Analysis

Operational gearing. Only 10% of the operating costs are variable costs. This means that a fall of 1% in sales would have a much bigger effect on operating profit. Using 2012 figures for the purpose of analysis, operating profit would fall by 10.5% from HK$55,000,000 to HK$49,212,000. The contribution/operating profit ratio would increase from a ratio of 10.5 (already high) to 11.6.

Using market values to measure **financial gearing**, the replacement of 25% of shares with debt capital would increase financial gearing from 0% to 25%. Using book values, however, the financial gearing would seem much higher.

The analysis shows that the net effect of the fall in sales revenue and increase in financial gearing, applied to the 2012 figures, would result in an increase in **earnings per share** from HK$0.935 to HK$0.982.

There are different views on how these changes would affect the **share price**, because although EPS would increase, the price/earnings ratio may fall, in response to the higher level of financial risk in the company's capital structure.