

Working Capital Management Performance in Air Asia, Malaysia Airlines and Qantas

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ABSTRACT

The main purpose of this case study is to benchmark the working capital management performance (WCM) among Air Asia, Malaysia Airlines, and Qantas with an intention to identify the best practices in WCM to enhance operational efficiency in cash flow from operations. This case study is conducted by employing generic benchmarking among Air Asia a low cost airline, Malaysia Airlines and Qantas full service airlines, with an intention to provide valuable insights into operational efficiency and the pattern of current assets investment and financing policies adopted in the airline industry. "Cash conversion efficiency", a financial performance indicator is used to measure the operational efficiency, while "Days of working capital" a non financial performance indicator is used to identify the current assets investment and financing policies adopted in the firms studied. The findings of this study reveal that the low cost airline outperforms the government and private owned full service airlines in the WCM. The government and private owned full service airlines studied do not have sufficient fund for their working capital requirement and the existing working capital in all the three airlines studied have not been utilized efficiently. This study also identifies an inverse relationship between the aggressive level of working capital financing and the cash conversion efficiency. Currently there is no available literature focusing exclusively on the WCM performance in the airline industry which may throw new light and

facilitate the process of improving cash flow from operations and reducing the cost of capital. A better understanding of the WCM practices in airline industry is especially beneficial because of the need for efficient utilization of the working capital employed to achieve enhanced operational efficiency.

Keywords: *Generic bench marking, working capital management, performance measurement, airline industry, cash conversion efficiency, low cost airlines, working capital financing*

Introduction

The airline industry's performance significantly impacts the global economy. It is transporting more than 2 billion passengers each year and more than 35% of the global merchandise trade by value (Khan, 2004). The industry also supports 32 million jobs and USD 3.5 trillion in economic activity (IATA, 2008). With nearly USD 380 billion invested in capital, the value created by this industry is not reflected in the profitability but suffered net financial losses of over USD 40 billion between 2001 and 2005 (IATA, 2006). Bisignani (2006), CEO, IATA, highlighted the industry needs for additional substantial capital to support the fast growing travel demand. But at the same time he pointed out that improving the efficiency of use of existing capital and the returns it provides is important if the new investment is to be attracted by the industry. While competitiveness of firms can be maintained in several ways, the reduction of unit cost by improving the efficient utilization of both fixed and working capital employed in the industry is a simple and real choice for the survival and success.

In the mean time, liberalization of the European Union air transport industry between 1988 and 1997 and its adoption in other parts of the world fuelled the rapid growth of low cost airlines in the industry (Francis *et al.*, 2006). While examining the low cost airlines experiences in Australia, Forsyth (2003) highlighted that entry of these airlines in the early 1990s led to some overall improvement in the performance of the industry. Contrary to the traditional full service airlines, the emerging low cost airlines appear to maintain simplicity, efficiency, productivity and high utilization of assets to offer low fares (O'Connell and Williams, 2005). Marcus and Anderson (2008) in their study on revenue management for low cost service providers highlighted that low-cost providers have emerged as important players in many service industries and particularly in the airline industry. Despite the fact that the low cost airlines concept has been proved successful, accepted in the market, and the low cost

airlines collectively outperformed full service airlines, they too failed to generate sufficient returns to cover their cost of capital (IATA, 2006).

Studies in the past (Vijayakumar and Venkatachalam 1996; Bliderbeek *et al.*, 1999; Shin and Soenen 2000; Shamsheer *et al.*, 2001) have revealed that the successful financial performance of a firm is mainly influenced by its performance in working capital management (WCM). Anand (2001) advocates that the objective of WCM of any firm is to manage the firm's inventory, receivables and payables in order to achieve a balance between risk and return and thereby contribute positively to the creation of a firm value. According to Striscek (2001), WCM is the most important function of the financial management and the operational efficiency in the WCM is expressed by how well firms collect their receivables, turnover their inventories, and pay their trade creditors on time. A study on 478 firms using monthly compustat data covering the period 1982-1998, conclusively asserts that large profitable firms with efficient WCM and a certain degree of uniqueness such as high spending on research and development and advertisement regarding their business are the most successful firms (Johnson and Soenen, 2003).

The above studies look at the WCM and performance in other industries, but currently no literature is available on this subject in airline industry. Therefore, in order to understand the financial performance or failure of the airline industry an insight into its WCM performance is essential. The main purpose of this case study is to benchmark the WCM among Air Asia, Malaysia Airlines, and Qantas with an intention to identify the best current assets investment and financing practices in WCM to enhance operational efficiency.

Literature Review

Corporate failures are common in competitive business environments, where market discipline ensures the survival of the fittest. While different reasons are given to explain the corporate failures or performance, a study on Tanzanian firms conclusively asserts that qualities of working capital investment decisions are responsible for a negative or positive return on investment (Bliderbeek *et al.*, 1999). In this study, the impact of WCM decisions between loss-firms and profit-firms were studied and it had been empirically established with evidence that working capital investment decisions in profit-firms are different from those of loss-firms. Shin and Soenen (2000) attempted to study the relationship between

profitability and net trading cycle and established with evidence significant positive relationship between the firms with shorter net trading cycle and higher profitability. Havoutis (2003) advocates that good cash management practices, in normal circumstances, could lead to optimal management of short-term assets and the efficient use of working capital to maximise the wealth of the investors. In their attempt to develop some common identifiable attributes to predict corporate failures among Malaysian firms, Shamsheer *et al.* (2001) concluded that current ratio, quick ratio, return on equity operating cash flow to current liabilities and operating cash flow to total liabilities showed a gradual deterioration for five years before failure and the most significant deterioration in these ratios occurred one year before failure and in the year of failure.

Strischek (2001) explains that WCM is important to bankers and investors and while judging the merit of each loan application bankers primarily considers the working capital and cash flow management skill that certainly impact the cost of capital. Hugon (1973) describes that it is quite well known that a firm's cash flow is important to its liquidity and internal financing but its importance to profitability is overlooked. Cash flow is the life blood of all growing businesses and is the primary indicator of business health (Majumdar, 1996). In the event of difficult or uncertain economic condition, carefully managed working capital is particularly relevant for efficient use of cash flows to reduce stress on existing bank lines. In other words, efficient working capital management means more cash flow to repay bankers as well as more value to reward investors.

In the case of airline industry, the key results reported by the IATA Economic Briefing No. 4, 2006, reveals that the industry generated positive returns between 1996 and 2004, but they were not sufficient to provide airline investors with the normal rate of return associated with the risk they take. During this period, with nearly USD380 billion invested in capital at an estimated cost of capital 7.5%, there was an annual average shortfall of USD11.7 billion between the actual return on invested capital USD16.8 billion and the level of return expected by the investors USD28.5 billion. In the down turn period 2001-2004, the average annual return further plunged to a very weak 2%. A segmental analysis between low cost airlines and full service airlines revealed that the low cost airlines also failed generate sufficient returns to cover their cost of capital.

Benchmarking has become one of the most popular tools in today's competitive arena of business management (Cox and Thompson, 1998; Foster, 1992; Mac Neil and Rimmer, 1993). A study on Fortune 1000 companies reveals that 65% of them use benchmarking as a tool to gain

competitive advantage (Anand and Kodali, 2008). Also, Wong and Wong (2008) highlighted that 75% of managers' worldwide reports use benchmarking as a tool for performance improvement. Generic benchmarking is a form of external benchmarking used for performance improvement process by looking at best practices, recognized nationally and internationally, or world-class organizations (Catalina and Laura, 2008). It involves comparison against the best, regardless of industry or markets (Andersen, 1999). Backx *et al.*, (2002) empirically examined 50 international airlines as to the influence of airline's ownership structure on its profit margin and rates of return, and identified that airlines with mixed ownership tend to perform better than public sector airlines, but worse than the private sector airlines.

As pointed out in the earlier section of this study currently there is no available literature focusing exclusively on the WCM performance in the airline industry which may throw new light and facilitate the process of improving cash flow from operation and reducing the cost of capital. This case study is designed to focus on generic benchmarking among Air Asia a low cost airline, Malaysia Airlines a full service airline and Qantas a full service airline, with an intention to provide valuable insights into the WCM practices adopted and performance in the airline industry. A better understanding of the WCM practices in the airline industry is especially beneficial because of the need for efficient utilization of the working capital employed to achieve enhanced financial performance.

Background

More than 50% of the world's population lives within six hours flying radius from Kuala Lumpur (Prospectus, Air Asia Bhd., 2004) reveals the potential size of the regional aviation market. Malaysia Airlines based at Kuala Lumpur is the full service national flag carrier in Malaysia. At the beginning of the year 2006, the Malaysian Airlines announced plans to sell most of its local and overseas properties including its Kuala Lumpur headquarters, to raise RM1.5 billion since the unprofitable airline faced the risk of cash crunch (Zulaifah, 2006). In order to streamline its working capital requirement, it also planned to raise further RM1.6 billion through one-for-three rights issue of shares (Reuters, 2007).

Air Asia, the first private low cost service provider entrant in Malaysia as well in Asia commenced operation managed by Conor McCarthy, an ex-Ryanair director, in December 2001 and succeeded to improve its

domestic market share to 30% within the first three years of operation (Francis *et al.*, 2006). Qantas, the flag carrier of Australia was established in 1920 and has remained a privately registered company subject to all the requirements of the law and with a commitment to profit making, even though the Australian government is the only shareholder and it appoints all the board directors (Davis and Lansbury, 1988). Since the collapse of Ansett in 2001, Qantas is the major full service airline operating profitably in Australia (Forsyth, 2003).

Despite the fact that comparison is not restricted to any one industry or market in generic benchmarking (Ahmed and Rafiq, 1998), there are few similarities existing among the three airlines studied. All the three airlines studied are based in Asia Pacific region (IATA, 2009). In the case of two full service airlines Malaysia Airline and Qantas studied, they are the national flag carriers of their respective nations with significant domestic markets serving long routes. While low cost airlines have reshaped the competitive environment within the liberalized markets (O'Connell and Williams, 2005) and emerged as important players in the airline industry (Marcus and Anderson, 2008), Air Asia has the pride of first successful low cost entrant in Malaysia and as well in Asia mainly competing with Malaysia Airlines for both domestic and overseas market. Being a Ryanair clone, it has achieved the world's lowest unit cost of \$0.023/ASK (Available seat per kilometer), a passenger break-even load factor of 52%, an aircraft turnaround time of 25 minutes, crew productivity level that triples that of Malaysia Airlines and an average aircraft utilization rate of 13 hours a day as against 8 hours Malaysia Airlines (O'Connell and Williams, 2005).

Methodology

This empirical study looks at the WCM performance of Malaysia Airlines and Qantas for a period of nine years 1999 to 2007 and Air Asia for a period of four years from its first year of listing from 2004 to 2007 using mostly secondary data relevant for the purpose of analysis. Details as to cash flow from operations, current assets, current liabilities, and turnover of the concerned firms for the relevant years were computed from the data in the published financial statements.

This study used two WCM performance measures: the cash conversion efficiency (CCE), a financial performance indicator to measure operational efficiency and days' of working capital (DWC), a non-financial

performance indicator to identify the working capital investment and financing policies adopted by the firms during the study period.

$$\text{CCE} = \frac{\text{Cash flow from operations}}{\text{Net sales}}$$
$$\text{DWC} = \frac{\text{Raw material inventory} + \text{finished goods inventory} + \text{receivables} - \text{Creditors}}{\text{Day's sales}}$$

CCE is a measure of return and DWC is a measure of risk (Anand, 2001) and hence both are used to evaluate the performance in the WCM. This methodology is currently adopted by CFO, Europe Magazine and REL Consultancy Service Group for their annual joint survey and study of the multinational firms on their WCM performance.

The measure “cash conversion efficiency” (CCE) can be calculated by relating cash flows from operating activities to sales revenue (REL Consultancy, 2001). This measure answers how well firms can convert revenues to cash flows (Kersner, 2001). The generation of free cash flow is an important metric to measure the success of the business and hence, used to evaluate the WCM of the firm (Rosen, 2001). Sagan (1991) highlighted that basic working capital ratios are important to the financial analyst or to the creditors, but they are less important to the finance manager. From the operational point of view, however, the financial manager’s primary concern is with the current cash flows and those flows that are expected in the future and therefore, he argued, satisfactory working capital ratios provide little comfort to management when they did not have funds to meet an immediately due payment.

The amount invested in the working capital can be expressed in terms of number of day’s sales requirement. This is known as “days of working capital” (DWC) and can be used to measure the WCM performance of the firm (REL Consultancy, 2001). If the payables exceed the total of the receivables and inventories, DWC is negative implying that the firm may be following the strategy of converting over inventory as quickly as possible, and paying the current liabilities as late as possible without involving intangible cost of stretching current liabilities. If the DWC calculated is negative, it also implies that the firm follows aggressive method to finance its working capital (Anand, 2001). DWC enables to identify of current assets investment and financing policies adopted by the firms. Being a non-financial measure and a leading indicator, DWC explains about what is happening now in the business and give a good

indication about the likely future financial performance (Johnson and Kaplan, 1987).

In order to understand the DWC of a firm, its components DSO (Days sales outstanding), DIO (Days inventory outstanding) and DPO (Days payable outstanding) should be ascertained. These components are also nonfinancial performance indicators. DSO is a relative measure of a business' debtor exposure and it measures the level of outstanding due at the end of a year expressed in terms of the number of day's sales (REL Consultancy, 2008). DIO represents how much inventory an organization has tied up across its supply chain or more simply – how long it takes to convert inventory into sales (REL Consultancy, 2008). DPO is a measure of a firm's outstanding payment liability and expressed in terms of number of days payments represented by the creditor balance. In the case of firms rendering services, both DIO and DPO have also been calculated using turnover of the firm instead of cost of goods sold (US Business Reporter).

$$DSO = \frac{\text{Sundry Debtors}}{\text{Day's sales}}$$

$$DIO = \frac{\text{Inventory}}{\text{Day's sales}}$$

$$DPO = \frac{\text{Current liabilities payable}}{\text{Day's sales}}$$

Results and Analysis

Cash Conversion Efficiency

It is obvious from Table 1 and Figure 1 that the CCE of Qantas varies from 10.10% to 17.74% with an average of 14.19% during the period of study while the CCE of Malaysia Airlines varies from (6.27)% to 16.14% with an average of 6.64%. In the case of Air Asia the low cost airline, the CCE varies from (0.04)% to 37.21% with an average of 19.31% during the period of study. It is obvious from Table 1, that the CCE of Qantas is consistently maintained in positive figures but the CCE of Malaysia Airlines not only fluctuated but also recorded negative figures during 2001, 2005 and 2006. Among the three airlines studied, Air Asia

Table 1: Summary of Working Capital Performance Over a 9 Year Period (1999 – 2007)

Year	1999	2000	2001	2002	2003	2004	2005	2006	2007	Average
CCE (Cash conversion efficiency)										
Qantas	14.30%	17.74%	10.80%	10.10%	11.35%	17.61%	15.42%	14.85%	15.52%	14.19%
MAS	13.39%	5.26%	(0.38%)	13.70%	12.37%	13.41%	(6.27%)	(1.12%)	16.14%	6.64%
Air Asia						7.36%	(0.04%)	32.71%	37.21%	19.31%
DWC (Days of working capital)										
Qantas	(75)	(106)	(100)	(62)	(30)	(71)	(32)	(87)	(102)	(74)
MAS	(163)	(126)	(103)	(282)	(32)	(65)	(83)	(77)	(76)	(112)
Air Asia						(28)	213	56	6	62
DSO (Day's sales outstanding)										
Qantas	91	82	68	106	109	84	92	49	51	82
MAS	71	79	65	73	83	71	75	53	45	68
Air Asia						108	296	278	189	218
DIO (Day's inventory outstanding)										
Qantas	10	11	12	12	14	12	10	9	4	10
MAS	15	15	14	15	15	16	19	11	9	14
Air Asia						4	3	4	2	3
DPO (Day's payable outstanding)										
Qantas	176	199	180	180	153	167	134	145	157	166
MAS	249	220	182	370	130	152	177	141	130	194
Air Asia						140	86	226	185	159

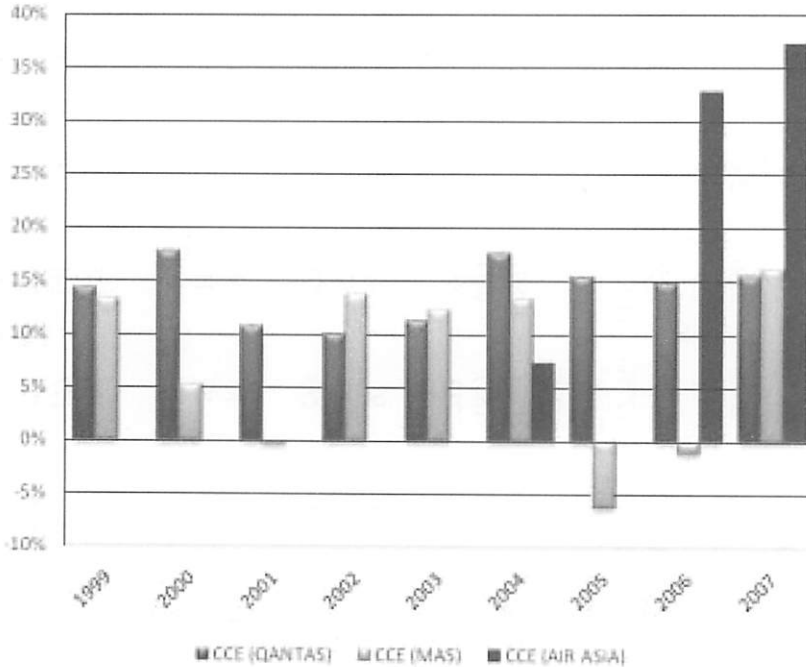


Figure 1: CCE for Airline Firms

has achieved the highest average CCE of 19.31% and seems to be improving the performance gradually. While CCE is a simple metric to derive, using it can provide powerful insights into the overall health of an organization’s cash-generation capabilities (REL Consultancy, 2008).

Days of Working Capital

As seen in Table 1 and Figure 2, the DWC of Qantas varies from (30) days to (106) days with an average of (74) days during the period of study. In the case of Malaysia Airlines, the DWC varies from (32) days to (282) days with an average of (112) days. The DWC of Air Asia varies from (28) days to 213 days with an average of 62 days during the study period. Both Qantas and Malaysia Airlines appear to have adopted aggressive methods to finance their working capital and the level of aggressiveness in the case of Malaysia Airlines is relatively higher than that of Qantas. Contrary to these two airlines, Air Asia appears to have adopted a moderate approach to finance its working capital.

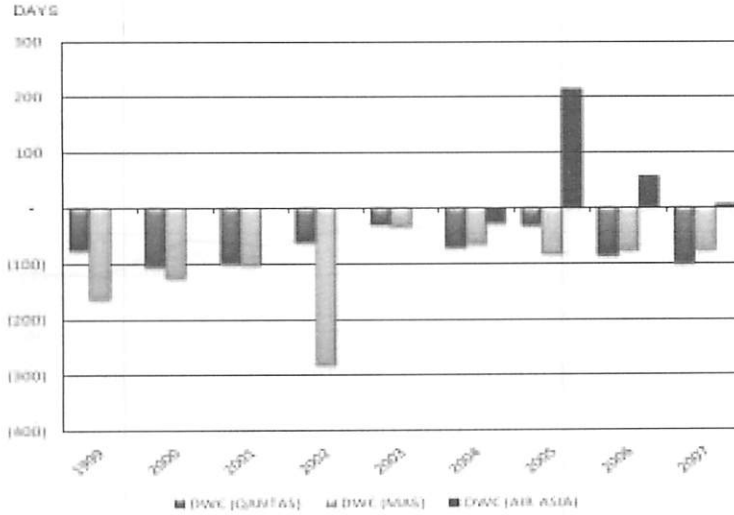


Figure 2: DWC for Airline Firms

Current Assets

DWC's components DSO, DIO and DPO enable to identify the current assets investment policies adopted by the management. Being non-financial performance measures and leading indicators, they could be able to explain what is happening now in the business as well as indicate the likely future performance of the firms studied (Johnson and Kaplan, 1987).

The current assets investment details are shown in Table 1 and Figure 3 for all the three firms studied. The average accounts receivable (DSO) for Qantas, Malaysia Airlines and Air Asia are 82 days, 68 days and 218 days respectively. In the case of Qantas, the DSO varies from 51 days in the year 2007 to 109 days in the year 2003. Malaysia Airlines' DSO varies from 45 days in 2007 to 83 days in 2003. Air Asia has the highest average investment in DSO among the firms studied and it varies from 108 days in 2004 to 296 days in 2005. It is obvious from Table 1 and Figure 3, all the firms studied have seemed to gradually improve their investment in DSO in recent years. However, in the case Air Asia, there is an urgent need to review its policies for investment in accounts receivable and unlock the excess capital invested immediately.

In the case of investment in inventory (DIO), Malaysia Airlines has the highest average investment equivalent to 14 days followed by Qantas

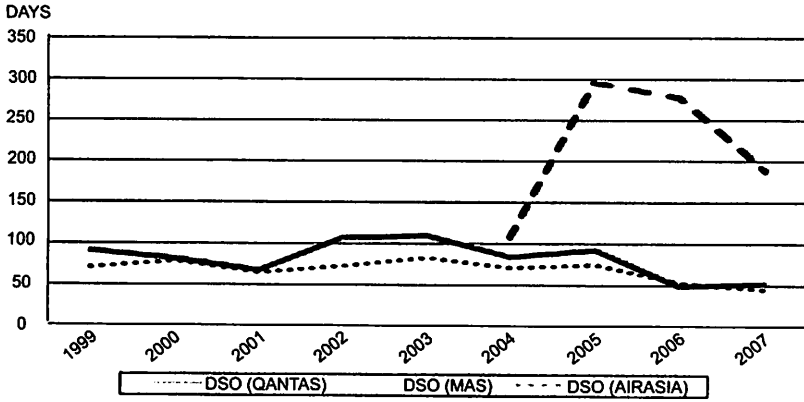


Figure 3: DSO for Airline Firms

10 days and Air Asia 3 days. It is obvious, from Table 1 and Figure 4, the DIO of Qantas varies from 4 days in 2007 to 14 days in 2003, the DIO of Malaysia Airlines varies from 9 days in 2007 to 19 days in 2005, and the DIO of Air Asia varies from 2 days in 2007 to 4 days in 2006. Despite the fact that all the three airlines studied seemed to improve their investment in DIO in the recent year 2007 studied, there is an urgent need for the Malaysia Airlines and Qantas to review their policies for investment in inventories and unlock the excess amount invested immediately.

In the case of accounts payable (DPO), Air Asia has recorded the lowest day's payable average of 159 days followed by Qantas with 166

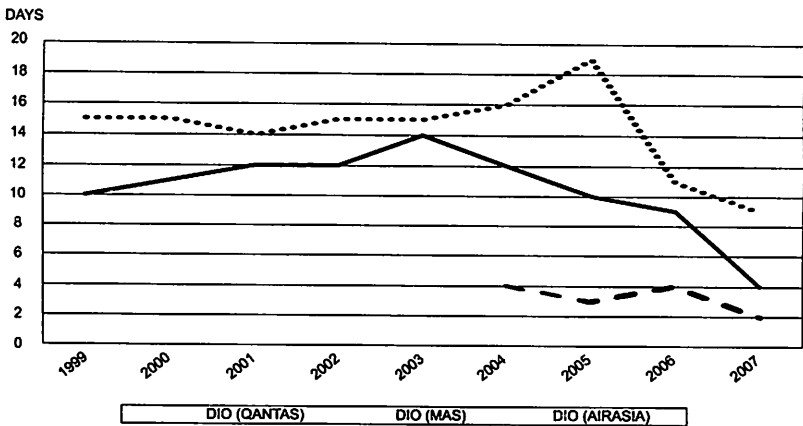


Figure 4: DIO for Airline Firms

days and Malaysia Airlines recording 194 days. It is also obvious from Table 1 and Figure 5 that DPO for all the airlines studied fluctuate randomly from year to year revealing that none of the firms studied might have formal current assets investment and financing policies or pay their creditors on due dates. In other words, the firms studied are stretching their liabilities due to their creditors to finance part of their current assets requirements. There is a need for all the firms studied to review, formulate and develop policies regarding timely payment to their creditors and this should be strictly implemented and followed by their finance departments. Apart from this, additional long term capital should be made available to finance a portion of their working capital requirements to reduce existing dependence on their creditors.

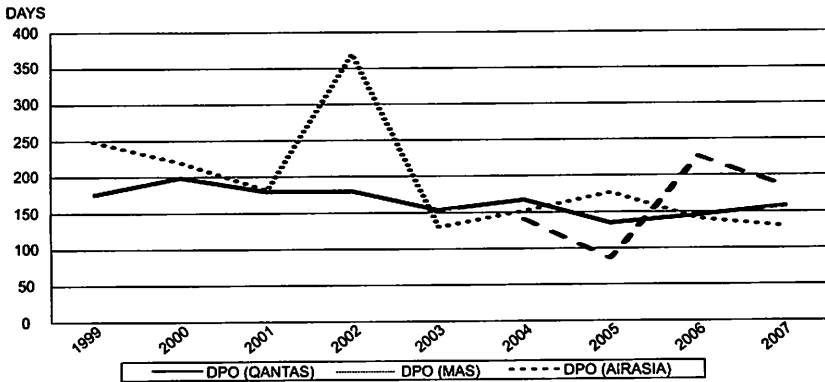


Figure 5: DPO for Airline Firms

Relationship between DWC and CCE

The average CCEs and DWCs of the firms studied are tabulated in Table 2 and the relationship between the two is shown in Figure 6. The finding amazingly reveals that there is an inverse relationship between the average DWCs and CCEs. Unlike the other two airlines studied, Air Asia adopted a moderate approach to finance its working capital which is comparatively less risky and achieved the highest CCE.

Table 2: Average CCEs and Average DWCs

	Average CCE (%)	Rank	Average DWC (days)	Rank
Qantas	14.19	2	(74)	2
MAS	6.64	3	(112)	1
Air Asia	19.31	1	62	3

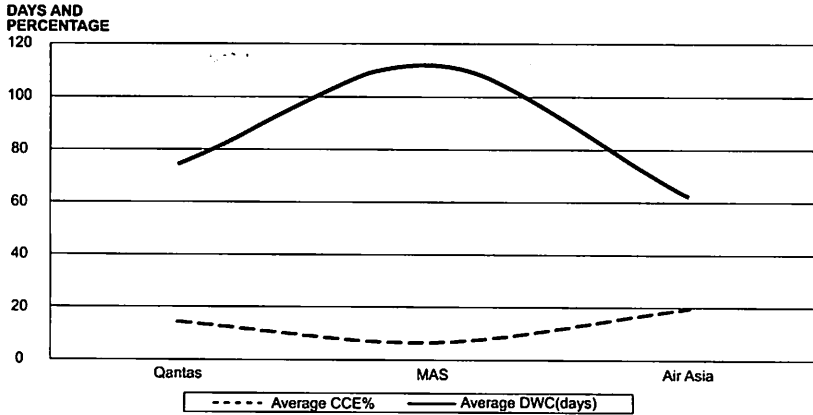


Figure 6: Inverse Relationship CCE and DWC

Discussions

A few decades ago, turnovers were used to measure the performance of firms and later on profit margins gained importance, and replaced the turnover (Rosen, 2001). But now, it is also recognized that maximizing cash flow is another related way of increasing the shareholder value (Havoutis, 2003). Malaysia Airlines recorded negative CCE during the years 2001, 2005 and 2006, and the lowest average CCE of 6.64% among all the firms studied. On the contrary, Qantas consistently recorded positive CCE and average CCE of 14.19% which is more than twice the CCE of Malaysia Airlines. Despite the fact that Air Asia has recorded negative CCE in the year 2005, the second year of its listing, it has achieved an impressive highest average CCE of 19.31% which is almost three times higher than that of Malaysia Airlines. It is obvious from Table 2 and Figure 6 that Air Asia is 1.4 times more efficient than Qantas and 3 times more efficient than Malaysia Airlines in generating cash flow from operations. Despite its size and level of operation, Air Asia was able

achieve higher CCE by considerably reducing costs and expenses, and increasing the incomes and productivity in its operations (O'Connell and Williams, 2005). Ultimately, the efficient working capital management practices adopted by Air Asia has generated higher cash flow from operations, may enable the management to repay their debt in time, and thereby add value to shareholders' wealth by minimizing the cost of capital.

DWC is a measure of risk (Anand, 2001) and it represents the firm's investment in working capital in number of day's sales. While comparing the performance of airlines across the countries, substantial differences encountered in the in the financial environment are difficult to reconcile, and using of the non-financial operating data may circumvent the problems such faced (Gudmundsson, 2002). Increasing the DWC will reduce the profitability of the firm (Shin and Soenen, 2000) while lowering the DWC will increase the risk of the firm being insolvent. The three airline firms covered in this study appeared to have adopted two different methods to finance their working capital requirements. Both the Malaysia Airlines and Qantas adopted aggressive method to finance their working capital while Air Asia adopted a moderate approach to finance its requirements. The highest negative average DWC that is, 112 days recorded by Malaysia Airlines in Table 1 reveals that it is highly aggressive in financing its working capital than Qantas and hence also highly riskier.

Adoption of aggressive methods by the full service airlines studied has three major draw backs. Firstly, these full service airlines may resort to borrowing huge amounts for short term with high interest rates and the high interest paid on such borrowings evidently reduce the generation of cash flow and hence efficiency in operations. Secondly, these full service airlines, due to their heavy short term borrowings may not be able to make their payments in agreed time to their stakeholders such as creditors, employees, bankers and others with their amid dissatisfaction. Thirdly, in the event these full service airlines are unable to meet their commitments with stakeholders, there is a possibility of facing risk of being insolvent and damaged reputation in the market.

Contrary to the two full service airlines studied, Air Asia has adopted a moderate approach to finance its working capital and financed a portion of its entire optimum requirement through its available long term fund. The policy adopted by Air Asia in its working capital financing adds several advantages to the firm. Firstly, the low cost airline may eliminate high interest payment on its short term borrowings resulting in higher generation of cash flow from operations. Secondly, this low cost airline may be able to make its payments in agreed time to their stakeholders, keep them

contended and enhance mutual co-operation. Thirdly, since the low cost airline studied may be able to meet its commitment with stakeholders in time the risk involved is considerably lower than that of full service airlines.

As for investment in DSO, Malaysia Airlines achieved the lowest average investment of 68 days followed by Qantas 82 days and Air Asia 218 days. Working capital is the fuel that powers global business operations, but too often unnecessarily high percentage of this fuel is continuously struck in the pump: locked up in aging invoices and a lengthy DSO (Sanjay, 2004). The low cost airline Air Asia appears to have invested relatively higher amount in DSO than other full service airlines studied and there is an urgent need to review and unlock the excessive amount invested in order to further enhance the operational efficiency of this low cost airline.

The main finding of this case study firstly, reveals that both the full service airlines studied do not have sufficient working capital to meet their varying levels of operations which might have resulted in their reduced CCE. Secondly, all the three airlines studied have not properly utilized their available working capital and that might have resulted in reduction in their respective CCE. Thirdly, Air Asia outperformed the other airlines studied with a comparatively higher CCE reflecting operational efficiency, and moderate DWC revealing moderate investment in working capital. This conclusion is also evidenced by the amazing inverse relationship established between the average CCEs and DWCs of the firms studied shown in Table 2 and Figure 6. Finally, it appears that all the three airlines studied might not have formal current assets investment and financing policies to be adopted at their varying levels of operations. The results of this study confirm the earlier findings that public sector airlines underperform relative private sector airlines (Backx *et al.*, 2002) and low cost airlines collectively outperform full service airlines (IATA, 2006). The results of this study also confirm the claims that no distinct individual or group can clearly benefit from public sector firm's profit result in weak governance (Alchian, 1965); and the politicians and bureaucrats may substitute their own goals and preferences, such as employment and prestige over efficiency and productivity considerations (Niskanen, 1971).

Conclusions

Before attracting further substantial capital for future expansion (Bisignani, 2006), the full service airlines studied need to provide for additional long

term capital for investment in working capital in order to reduce or eliminate their existing level of aggressive financing. There is also a need for all the airlines studied to review, formulate and develop their new formal current assets investment and financing policies, reduce costs and expenses, and improve productivity in all their operations in order to enhance their cash flow from operations and reduce cost of capital (Havoutis, 2003). The major limitation of this study is that it mainly focuses on improving cash flow from operations using current assets investment and financing policies in the airlines, while several other factors such as cost reduction and enhancement in productivity could also improve the cash flow from their operations. In addition, being a case study the findings of this study may not reflect the general truth and as such future studies on this subject should extend to cover more airlines. Nevertheless, the CCE and DWC averages developed in this study can be effectively used as a tool for operational benchmarking by all the three airlines covered in this study to enhance their performance in WCM.

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