

Tap your own bank A four year review of Working Capital and Liquidity Development

By Stefanie Jungmann and Julia Haydn

2010 was a recovery year for the majority of the industry players. Strong revenues and EBIT margins were recorded in the second part of 2010 generating further improvements compared to 2009.

Although the outlook at the beginning of 2011 was very positive for many companies, new clouds are on the horizon. The recovery in most developed economies since the beginning of the year was slower than expected. 15 million jobs were permanently lost since the last crisis¹. Indicators are signaling a rocky road ahead:

- Increasing financial and fiscal uncertainty
- Record level public debt
- Decreasing trust in both the USD and EUR
- Interest rates maintained at low levels with rising inflationary pressures
- Increasing volatility in stock markets
- Record gold prices
- Increasing inventory levels and declining economic confidence
- Declining growth rates in China

The pulp and paper industry is naturally impacted on both the demand and the supply side.

Demand has been good but is now slowing down or turning, inventory levels are increasing. Prices remain high with price increases announced in some segments. However, as other segments are turning, it remains questionable if these increases will go through. Generally the demand trend is downward. Overall, despite a recovery since 2009, demand in many segments is still below pre-crisis levels – especially in printing and publishing grades – a trend that attests to the structural change in these segments.²

Wood prices remain on a high level; whereas the hardwood index (HFPI) recently hit the 24-year high in Q3 2011, the softwood index (SFPI) just turned, decreasing for the first time since Q2 2010. In contrast, pulp prices have reached the peak already some time ago, now following a downward trend. Recycled paper prices have also started to decline at a steady pace. Similarly prices for starch and chemical costs remain high but are moving downward. Transportation costs have stabilized after a rebound post-crisis. However, in some regions constraints and increasing prices can be observed due to the adjustment of transport capacity during the crisis.

Overall, the future does not look too bright. Comparing the current situation to the situation in 2008 there are striking similarities. Only this time it is more the public sector that is ailing, also because of the bailouts from 2009. Current problems are directly linked to unresolved problems from the crisis of 2008/2009. In both cases the financial sector is being bailed out only that governments don't have the money or capacity to cover for all potential risks. Cynically the financial sector has become even bigger since the last crisis. The planned regulation of the sector was not successful.

In a press release from September 8th 2011, the OECD reports that the economic growth in the major industrialized economies has nearly come to a halt. Whereas satisfactory growth can still be observed in the emerging economies, the G7 countries (excluding Japan) will have to accept growth rates below 1% in the second half of 2011. Germany as an exception has had record growth rates as a result of the recovery from the 2009 crisis.

In its most recent publication on world economic outlook from September 2011, the IMF warns about a new dangerous phase in the global economy. According to the paper, the economic recovery has become much more uncertain than just half a year ago. Although a part of the slow down can be explained through exceptional one-time events, such as the Japanese earthquake and tsunami or the political changes in the Middle East, it is also clear that there are structural issues which impact growth.³

The IMF has therefore adjusted the forecast on global growth: Whereas the growth outlook in January 2011 was estimated at 4,5%, the growth outlook in September was only 4%. This equates to a decrease of 11%. The developed economies are expected to have a 1,6 percentage increase in 2011 and 1,9 percentage increase in 2012. The projection for the European Union is especially gloomy – a decrease to 1,7% is forecasted in 2011 and 1,4% in 2012.

With another economic crisis on the horizon it is worthwhile revisiting the actions taken by many companies in the industry since 2008. Especially as financing became short, companies had to look more closely at their working capital in order to improve cash flows from internal operations.

In this article we review the development of working capital across regions and different segments of the industry across four years. The analysis is based on publicly available information of companies in the pulp and paper sector. The results are based on 65 public companies in the sector excluding pure pulp producers.

¹ Source: OECD

² Source: Preliminary statistics CEPI 2010

³ Source: IMF, World Economic Outlook – Slowing Growth, Rising Risks (WEO), Sept 2011

StepChange has gathered data on the top stock listed companies covering the paper and packaging sector to compare the financial development of 2008 to 2011 (up until Q3). The research reveals that 2010 revenues have increased by 12% compared to 2009. In 2009 revenues were 10% below 2008 levels. Comparing the first two quarters of 2010 vs. the last two quarters of 2010 the consolidated revenue increased by 7%. In 2010, 3rd and 4th quarter EBIT margins were 4% higher than those of the 1st and 2nd quarter.

In 2010 asset consolidation and closure continued with in many areas of the industry. Major players sold some of their assets in order to improve their equity ratios and become less dependent on financial borrowings.

According to PPI magazine, in 2010 the closures reached > 2 million tons, with more than half in the graphic papers segment. New capacity on the market totaled more than 2 million tons, of which 1,2 million tons came from within the packaging segment.

Having learned from the financial crisis, industry managers are well aware about the importance of cash, and a short cash to cash cycle. The faster a company can get the cash to turn, the lower the borrowing rate will be.

Working Capital Development

Working capital has continued to remain an important agenda item for companies within the industry. In general, working capital programs established during the crisis seem to have continued to deliver good results until 2009/2010. In 2008, the average working capital turnover ratio was 14,0%. After decreasing to 13,5% in 2009 and 13,6% in 2010, the ratio increased again to 14,7%.

From 2008 to 2011, it can be observed that the spread between the lowest and highest working capital levels has narrowed. Average WC levels for 2011 state 14,7%, which is a higher number than pre-crisis levels⁴.

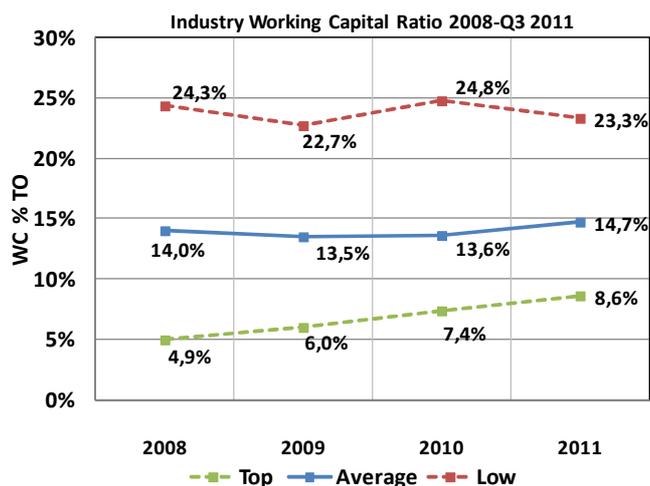


Figure 1: Development of working capital 2008-11

Unfortunately, the top-performers in terms of working capital management have been increasing working capital significantly. Within this group, the working capital ratio has steadily increased by 76% (3,6 pp) from 4,9% in 2008 to 8,6% in Q3 2011. Low performers managed to decrease their working capital from 2008 to 2009 by 1,6% to 22,7% in 2009. In 2010, levels increased to 24,8% which is an even higher level than pre-crisis levels. By Q3 2011, the ratio went down to 23,3% (1,5 pp). Companies with a generally lower profitability often show better working capital ratios due to the fact that these companies have the constant need to watch their cash flow, in order to stay liquid.

However, there are big regional differences: European companies reduced working capital significantly during the crisis year of 2009; however, working capital levels have again sharply increased by Q3 2011 to 13,7%. North American companies increased working capital slightly in 2009 and decreased again to 12,4% in 2010. By Q3 2011, North American companies have increased WC to the same extent than European companies. Working capital levels in Asia have remained high with a peak of 18,8% in 2010. In Q3 2011 levels have decreased again to 18,3%.

⁴ A company with a working capital turnover ratio below 10% is considered as a top-performer where as low-performers report a ratio above 20%. Average number consists of the average of all companies in scope.

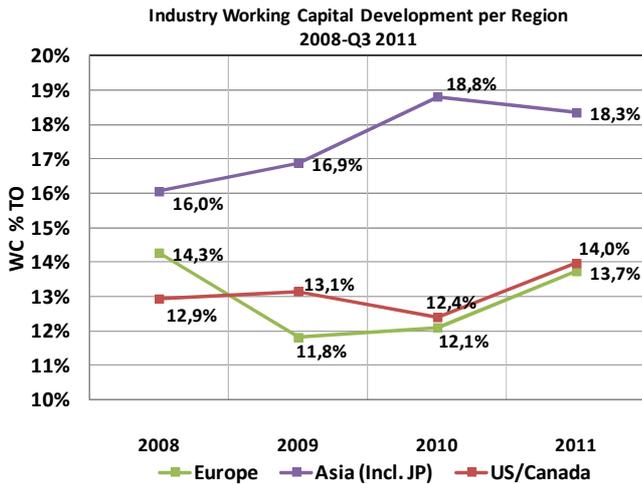


Figure 2: Industry working capital ratio per Region 2008-11

In 2008 and 2009 there was an overall downgrade of the pulp and paper sector by rating agencies. Credit insurance companies in turn were forced to reduce their exposure and reduce the level of coverage. Subsequently, companies had to cover a higher portion of the risk internally which led to the need for managing working capital more tightly. Further downgrading has occurred in 2010 and 2011. According to Atradius, a major credit insurance provider, the expected default frequency rate (EDF) has been continuously declining since 2009, although still significantly above pre-crisis levels⁵. In light of the current economic turbulences it is likely that the default rate may soon increase again.

Given these predictions it becomes natural to refocus on liquidity management.

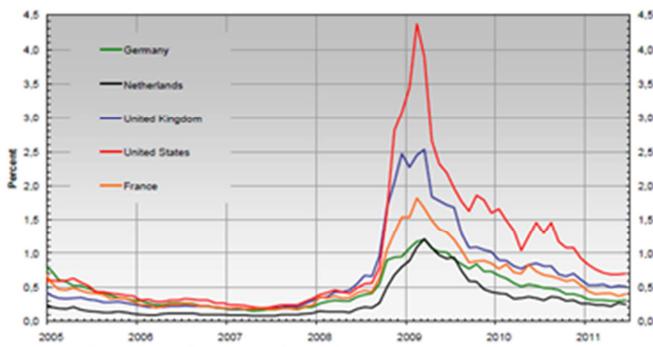


Figure 3: Credit default frequencies by country

The analysis of the working capital by receivables, payables and inventories provides more insight. DSO (days of sales outstanding) indicate how fast companies are collecting their money from the customer, DIO (days of inventory outstanding) show the total inventory levels in days including raw materials and finished goods. DPO (days of payables outstanding) show after how many

days companies are paying their suppliers. In short, it can be summarized that WC levels have been quite constant in 2009 and 2010. Customer payment behavior deteriorated from 2008 to 2009 by 5 days to 58 days. From 2008 to 2009, this DSO increase has been compensated by paying suppliers later as DPO increased to the same extend. Customer payment behavior has hardly changed from 2009 to 2011. In 2010 and 2011, it seems that suppliers have increased the pressure on companies again. By Q3 2011, suppliers were paid after 50 days. Inventory levels were with 45 days as high as in pre-crisis levels 2008. Since 2009, DIO show a tendency to increase.

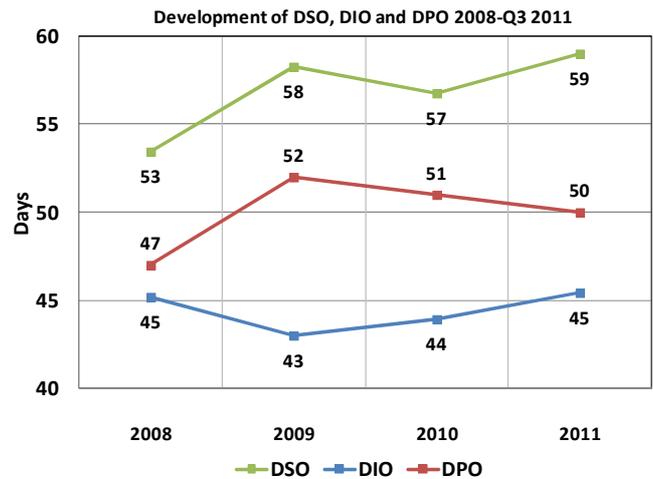
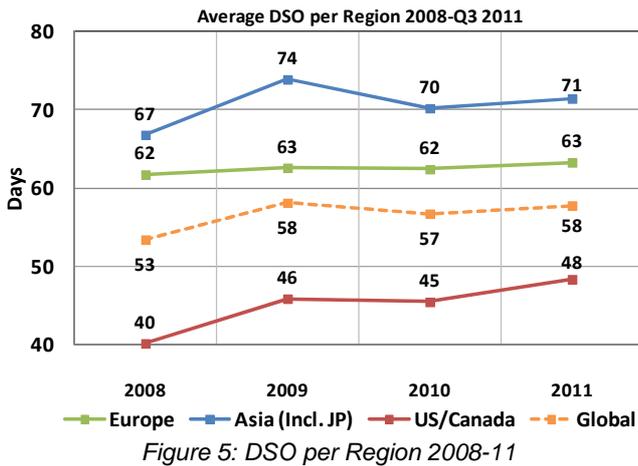


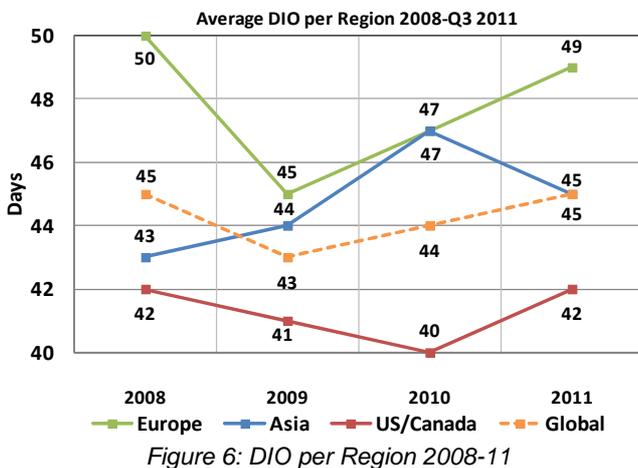
Figure 4: Working capital levers 2008-11

As Figure 5 shows, DSO development has been quite different across the regions. North America has the lowest DSO values; levels have increased by 8 days (20%) from 2008 to 2011. Between 2009 and 2010, DSO stayed stable at 46 and 45 days. In Europe receivables values stayed stable across the last 4 years. Receivables have increased from 2008 to 2009 from 62 to 63 days (2%) and decreased again back to 62 days in 2010. In 2011 DSO increased one more day to 63 days. In Asia, levels have increased from 2008 to 2009 by 7 days to 74 days. In 2010, levels decreased again to 70 days. For Q3 2011, a small increase of one day to 71 days can be noticed. It has to be stated that especially in Europe the average is influenced by a wide range of very short (Germany, Austria, Switzerland) and very long (Italy, Greece, Spain) payment terms.

⁵ Source: Atradius Economic Outlook September 2011, The EDF chart is based on publicly listed companies and the likelihood of default within next year. Default is defined as a failure to make payment, or the initiation of bankruptcy proceedings.



The inventory comparison in Figure 6 shows that North America has the best performance of all regions with the lowest average inventory levels. Asia and Europe show higher levels which can traditionally be explained with higher transfer times in some cases because of country borders. The North American DIO levels are fairly stable and vary between 40 and 42 days, with the lowest level of 40 days in 2010. Europe has managed to improve its inventory levels from 2008 to 2009 by 5 days; however, has increased its levels again up to 47 days in 2010 and 49 days in 2011. The Asian DIO has increased from 43 days in 2008 to 47 days in 2010 (increase of 9%) and decreased again to 45 days by Q3 2011. On average in Q3 2011, companies had 45 days in inventories.

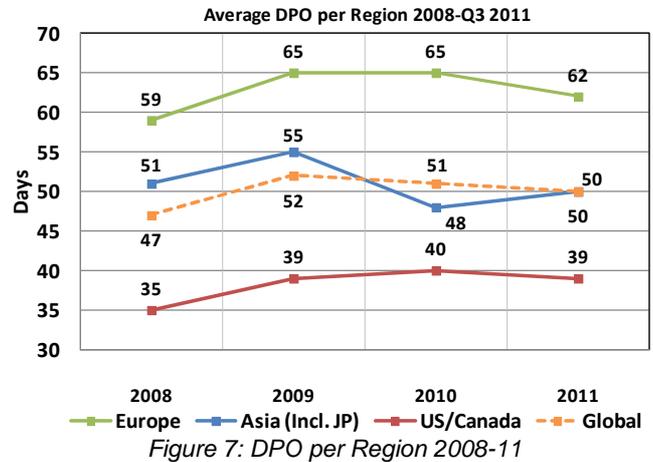


As Figure 7 shows, since 2008, in North America, payables have consistently increased from 35 to 40 days (14%). In Q3 2011, levels have decreased again by one day to 39 days.

Until 2010, Europe shows the same good picture with increasing payables from 59 days in 2008 to 65 days in 2010. In Q3 2011 however, Europe has decreased its payables again to 62 days. After a sharp increase of payable levels in Asia from 2008 to 2009 of 4 days to

55 days, Asia has decreased its levels back to 48 days in 2010 and 50 days by Q3 2011.

Overall, the gap between the continents has narrowed due to the fact that the US has succeeded in increasing payables over the years.



Improving working capital through payables is generally the fastest way to improve. To put pressure on suppliers through tough negotiations and to structurally improve internal processes should be the first measures to implement.

The approach to put pressure on suppliers has to be handled with caution though as this might lead to market chain reactions. This is why some countries (e.g. France) have passed legislation to reduce payment terms in order to improve liquidity.

CCC

The development of the cash conversion cycle (CCC)⁶ was also analyzed for the timeframe 2008-Q3 2011. The cash conversion cycle measures in days how long it takes from the payment of input materials to suppliers via inventory storage to receiving payment by the customers (DSO+DIO-DPO).

Results of this analysis are shown in Figure 8.

⁶ CCC = DSO+DIO-DPO In this case the CCC was calculated by mathematically normalizing the denominator for inventories, receivables and payables using a turnover-based calculation to make the CCC for different companies comparable. This is contrary to the typical CCC calculations where DPO are subtracted from DIO and DSO despite different denominators (DIO and DPO are calculated through division by costs of goods sold)

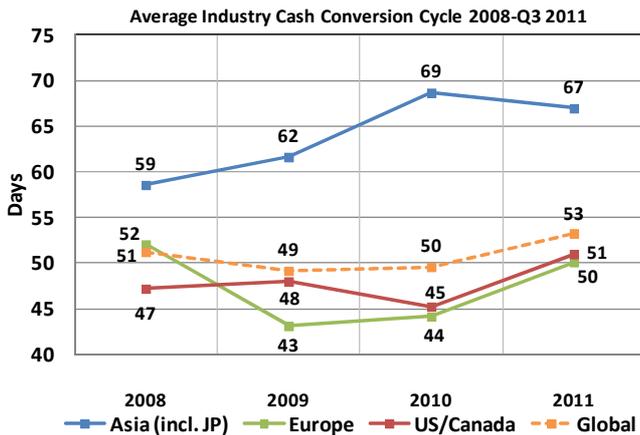


Figure 8: Average industry cash conversion cycle 2008-11

The regional comparison of CCC regulates the outperformance of North America in terms of receivables and inventories somewhat because of lower payables compared to Europe and Asia. Since Europe managed to decrease its CCC, North American and European levels by Q3 2011 with 51 and 50 days are almost the same. Up until 2009, the trend for Europe was positive; however, in 2011 there was again a sharp increase of the CCC for Europe, as well as for North America to climb higher than pre-crisis levels. For Asia, the trend since 2008 up to 2010 has steadily gone up. In 2008, Asian companies started with a CCC of 59 days. By Q3 2011, Asia managed to decrease the CCC compared to 2010 by 2 days to 67 days.

On average, from 2008 to 2009, the graph shows a stable development in the cash to cash cycle. In 2008, companies needed 51 days on average until purchasing and production was turned back into cash. In 2009, an improvement of 2 days was achieved, and after an almost stable 2010 with a CCC of 50 days, in 2011 the cash to cash cycle has so far increased by 3 days to 53 days, outreaching the level of 2008 by 2 days (increase of 4%).

Gearing Ratios

The debt-to-equity ratios provide an insight into the leverage levels of companies in the industry.

Figure 9 shows that overall, the average gearing ratio has decreased by 26% since 2008, now reaching a ratio of 1,7 by Q3 2011. The development has been steady and all regions have reduced debt levels until 2010. For 2011, only Europe has managed to keep its gearing ratio; whereas Asia and North America experienced a slight increase. By Q3 2011, Asia has increased its ratio again to 1,9. By Q3 2011, North America has the highest financial leverage of all regions. The US outperformed concerning the reduction of its debt since 2008 and succeeded in decreasing the ratio from 2008 to 2009 by 0,8 points to 3,0. In 2010, the ratio was again decreased by another 1,1 points to 1,9. For Q3

2011, the ratio shows 2,1. Overall, the US decreased its debt-to-equity ratio from 2008 to 2011 by 45%. The overall gap between the continents has decreased significantly. However, there are signs of stagnation since 2010: The overall improvement of the average industry gearing ratio from 2008 to 2009 was 0,4 points, followed by another decrease of 0,3 points from 2009 to 2010, and a slight increase of 0,1 points from 2010 to 2011 to 1,7. This is a natural development as excessive equity ratios are not useful with respect to maximizing ROE. Many companies had to clean up their balance sheets and improve financial health over the last years. With improved financial health the companies have been able to afford new acquisitions. This has led to an increase in gearing for some companies as some of the biggest acquisitions have taken place in 2010 & 2011 (Rock Tenn / Smurfit Stone, UPM / Myllykoski, IP / Temple Inland).

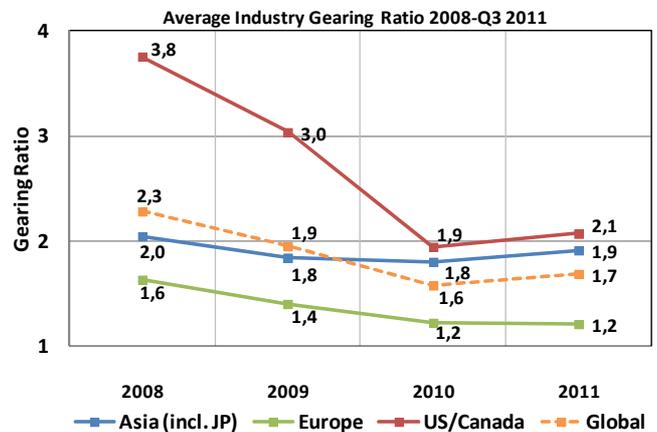


Figure 9: Average industry gearing ratio 2008-11

Companies in Asia and Europe have gradually reduced their gearing but have had less pressure and an overall lower risk level with respect to debt. From the three observed regions, between 2008 and Q3 2011, Europe is the only region that has managed to stay below the global average although the gap to North America has been getting smaller in the recent years. North American companies, on the contrary, have been moving steadily towards the global average. Whereas in 2008 the gap was +1,5 points (3,8 to 2,3), by Q3 2011 it is merely +0,4 points (2,1 to 1,7).

Active working capital management has been an important part in reducing financial leverage. Tapping the internal bank to repay loans or co-finance acquisitions in order to reduce interest payments for external credit lines has been a key priority of many companies in the last years.

Finding the money

As illustrated above, the key influencers of working capital are inventories, receivables and payables. Payables and receivables management are related to financial processes, whereas inventories are depending on physical processes and are tied directly to operating practices and supply chain processes.

Typically the financial levers influence a bigger share of working capital. Reducing working capital by managing the collection and payment processes almost seems too obvious to discuss. However, tight working capital management requires a breakdown of the processes that drive working capital levels. Additional value can be captured through managing the details.

Payment terms often have a historical background and are typically not revisited frequently after initial contract closure. Prices, service levels and volumes change whereas payment terms often remain static. Therefore, it is even more important to put emphasis on negotiating favorable payment terms both with suppliers and customers periodically.

Customer payment term harmonization goes hand in hand with customer segmentation. In other words, what is the relation of the customer value to current payment terms? Sometimes less profitable and low-margin customers receive better payment terms regarding net payment days than customers that are more profitable. Suppliers can also be segmented for payment term renegotiations. Sometimes suppliers with lower spend offer better payment terms when compared to larger suppliers in the same spend category. However, with respect to spend it is important to focus on main spend items and volumes to achieve an improvement in working capital. Although it is important to have standardized minimum payment terms, the benefit of switching hundreds of C-suppliers (low purchasing volumes) by a few days is often limited compared to tough negotiations on payment terms with big suppliers.

The categorization of payment terms of customers according to margin, and of suppliers according to spend category provides greater visibility and control in the negotiation process. Payment terms need to be standardized. Only a limited number of payment terms should be allowed for each customer and supplier segment. Some companies even manage 80% of spend with only one payment term and limit customer payment terms to only a few depending on their power position. Although not fully comparable, best practices concerning payables management can be identified in other industry segments such as consumer goods or global retail. These industries standardize their payment terms and payment processes and force them upon their supply chain partners. Some of these processes and practices

may also be applicable for companies in pulp and paper.

Enforcement of guidelines for keeping working capital under control is also crucial for the handling of credit limit overruns. If a customer order exceeds the insured amount of receivables by the internal tolerance level, a delivery stop should be placed onto the order and sales should not be able to override it.

Potentials can also be found in the internal process set-up and the responsibilities in the process chain. The frequency and intervals of the dunning runs play an important role in pursuing overdue customers early in the process. Experience shows that some customers trigger payments only after receiving the first or second dunning letter.

Additionally, the defined grace period determines when a customer is considered overdue. Reducing grace periods may incur additional work as most customers tend to pay within the defined boundaries but also demonstrates that agreed terms are enforced strictly.

In addition to payment terms defined, overdues have a significant impact on the working capital performance. Although varying by country, weighted overdues of >7 days can be considered poor performance whereas average weighted overdues <3 days of receivables can be considered top tier. A company's ERP system can be customized to support the approach to reduce overdues.

With respect to overdue collection responsibilities much is often left to the sales force resulting in settlements in favor of the customer. To help sales maintain good customer relationships a "bad cop / good cop" approach can be applied to segregate duties. Much of the process responsibility for follow-up, dunning and collection can be assigned to the finance and sales support functions. In combination with strictly standardized payment terms, these processes can be very effective in reducing overdues.

With respect to creditors (payables), potentials can be found in the process details of the payment process.

Often supplier payments are made before the due date. This can be the case if for example ERP systems are set up to make payments once a week. Payments are often programmed to be made on the last possible payment run date before the due date in order to avoid late payments. In case of a weekly payment run this would mean that the ERP system set-up would generate 3,5 days of early payments on average.

Alternatively it can be communicated to suppliers that payments will be made on the first payment run after the due date, which is even better than daily payment runs. In case of weekly payment runs this would statistically lead to a working capital improvement of 7 days

on average compared to the situation prior to the change. To avoid conflicts with suppliers, payment run frequency can also be extended to two runs a week improving working capital by 5,25 on average with the same logic.

Money in storage

The third lever to improve working capital is inventory. Inventory seems to be the easiest working capital lever to control, as the assumption is that inventory can solely be controlled internally. However, the objective of inventory management is to balance customer service level requirements against inventory holding costs and production changeover cost. Finding the optimum stock levels is a skillful art of forecasting demand and managing against volatilities in the supply chain which includes many external influencers. Many companies tend to apply a rather simplistic approach with respect to managing stock. A simple but misleading formula is to apply "lead time plus a little surplus" to define the amount of inventory per stock keeping unit (SKU). However, managing same service levels with less stock requires definition of cycle stock and safety stock. The cycle stock required is calculated based on average demand considering lead time or production cycle time and by taking order frequency into consideration. The safety stock needs to cover against future volatility in demand, transportation time or volatility in production. Models with any given level of sophistication can be build to define optimum stock levels. Most ERP systems technically support calculation and determination of optimum stock levels improving decision making in many cases dramatically.

As can be identified above, the key influencer of stock keeping decisions is based on future demand volatility. This can be tackled by improving transparency of demand, taking historical data into consideration and applying forecasting processes.

Many companies already use statistical methods to analyze demand patterns and trends of historical data. This approach is the first step towards demand based inventory management as it allows recognizing past order behavior and seasonality patterns. Leading practice is the application of a forecast which enables timely adjustments of inventory levels and positions. To avoid an over-complication of business processes and to achieve quick results forecasts should focus on the biggest inventory drivers. To maximize the benefits for top inventory items, a sales forecast on SKU - or article level is advisable. More sophisticated methods considering the profitability of an inventory item such as "turn-and-earn" concepts can be applied to identify which items to forecast.

To handle the vast amount of data a forecasting application can not only automate the process but also provide a statistical forecast as a base for manual review. Very often the forecast engine of such applications produces excellent results in recognizing historical patterns and seasonality. The manual interface provides customer insights and serves as a decision basis for marketing activities, customer promotions and capacity management.

Equipped with such information inventory levels and positions can be determined more accurately and synchronized with the expected demand changes.

A focus on the high volume and high value items can yield significant savings quickly. Nevertheless, overstocking can still occur if demand unexpectedly drops. Therefore, processes to monitor and address the symptoms of inefficient inventory management, high stocks, need to be in place for all inventory items. In addition to the management of stock levels against defined inventory targets there is often a lack of operational stock management guidelines and principles. Although total stock levels may be in line with overall targets, the inventory age and detailed churn analysis may show a different picture. Often the age analysis of inventory reveals that operational potentials exist in reducing aged stock. Aged stock is often caused by insufficient focus on physical inventory management. This is sometimes related to physical storage principles without application of "first-in-first-out" (fifo). The root cause is sometimes warehouse management practices and warehouse layouts. In case goods are stored against a wall, forklift drivers try to minimize the number of handling maneuvers which leads to a "last-in-first-out" (lifo) principle.

Potentially aged stock becomes dead stock not only with an impact on working capital but in this case directly on profit. The remedy is to continuously monitor aged stock lists and to have guidelines about which actions to take. With respect to short term working capital improvements, aged stock should be assessed against opportunities to sell it, use it in the production processes, potentially charge it to customers or if no alternatives exist, to devalue and dispose of it. Overall, processes need to be established that enable monitoring and enforcement of processes that lead to avoidance of aged stock.

Making sure the money rolls in

According to the principle "you get what you measure" and "you cannot control what you don't measure" it is essential to have performance metrics, targets and responsibilities to empower the organization. The performance metrics and the related reporting system will help to align inventory levels and positions to the actual

demand situation. A performance management framework measuring the key working capital parameters in all three working capital areas is a prerequisite for a flexible and adaptive organization which adjusts itself to important business events. Additionally, the performance measurement system needs to be in line with personal performance targets. An example is a target-conflict between working capital and sales targets. It is common that sales managers are expected to reduce working capital, but at the same time their personal bonuses are only dependent on sales volumes. In this case initiatives may fail when a sales manager has to trade between either achieving his own bonus or achieving the company targets. Therefore, performance systems need to encompass growth, profit and working capital targets to balance scorecard achievements.

Sustainability – Keep the money flowing

It can clearly be seen that companies have retained a working capital focus from 2008 to 2010. However, up to 2010, the achieved levels were rather maintained than further improved. This can potentially be explained as working capital management was critical for many companies during the crisis. The emphasis during the last year of many companies has been on strategic growth (M&A), and transformational sales and supply chain projects. Therefore, it is understandable that working capital has not decreased further but increased again in 2011. With the next crisis on the horizon it will be interesting to observe companies reactions in terms of working capital management.

As comparison shows, companies have mainly improved their payables situation until last year (2010). To improve working capital ratios again, it will become increasingly important to start increasing payables levels while at the same time reducing receivables and inventories. A key to further and step-change reduction will be an improvement of overall supply chain management capabilities. Inventory level can only be reduced so much through operational measures. Further improvements require a sophisticated transformation of supply chain processes which tend to be rather traditional in the pulp and paper sector. Many companies have started to focus on overall supply chain improvements - not just for the sake of reducing working capital but for the sake of overall service improvements and capturing competitive advantages.

To improve working capital levels sustainably, companies will have to focus even more on improving their internal processes and linking them to external partners. Long term successful and world class working capital management cannot be achieved in isolation. A comprehensive supply chain approach is needed in order to improve inventory levels effectively and sustainably.

This can be applied in multiple ways. One aspect is to take a holistic view on all relevant processes and interfaces related to inventory management – re-order definitions, replenishment processes, inventory management responsibilities, order processes, material intake and handling processes. Significant improvement potentials are hidden in the interfaces between all these processes. A different aspect is to synchronize all processes with external parties – standardizing data, information and process flows across supply chain partners need to target management with significantly lower inventories. Increased transparency and shared objectives foster the reduction of redundancies and duplications across the supply chain for mutual benefits of all involved partners. Another aspect is to expand the definition and span of control within the entire supply chain. This means actively managing the inbound & outbound supply chain. This will support visibility and control of externally held and controlled stock, mode of transport selected, time and condition of deliveries and support management of total supply chain costs.

In summary, it can be seen that there are different levels of sophistication with respect to working capital management. Taking an operational approach is only a start. Trying to achieve world class working capital levels sustainably will require a holistic view on the drivers of working capital. In the pulp and paper industry this will only be achieved through an integrated philosophy of working capital management and supply chain excellence.

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