Arthur D Little

Dealer Risk Assessment and Contingency Plan Development

How to evaluate and mitigate dealers' risk of bankruptcy in order to minimize the impact on sales volume

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Abstract

For a longer period of time car dealers have been struggling with diminishing profitability figures due to increasing operational cost and strong competition. But now the financial crisis and the credit crunch take their toll on automotive retailers even more all over the world. For example, the level of dealer bankruptcies skyrocked from a 200 dealerships plateau up to 900 business failures per year in the USA in 2008. Dealer insolvencies directly translate into increasing risks in terms of sales volume to the car manufacturers. Therefore, systematically assessing this risk is key and the first move towards taking appropriate countermeasures that help the dealers to keep their business operations. For this purpose Arthur D. Little has developed the so-called Dealer Risk Assessment.

Current Situation and Need for Action

Over the recent years car dealers' profitability has eroded due to increasing operational cost: In the USA, for instance, the total costs of an average dealership increased by 12.9% between 2002 and 2007. Since the total revenues increased only by 6.7% during the same time span, the net profit before taxes of an average dealership fell by 17.5% from 1.9% to 1.5% of total sales.[1] As a consequence of the financial crisis and tight credit markets, weak sales have stacked the odds even more against car-dealer profitability: In 2008, the USA franchised car dealers sold 18% less vehicles compared with 2007.[2] Also in the EU, car sales dropped since the summer of 2008 and crashed further in the final quarter of the year after having stayed within a relatively narrow trading range between 16.7 million and 17.7 million vehicles. Moreover, the market continues to fall in 2009 and will not resume growth before 2010.[3]

Since dealers need retail credit to facilitate sales, working capital loans to meet current cash flow requirements such as payroll, and floorplan financing to buy their inventories of vehicles from the automakers, access to sufficient credit on reasonable terms is key for car dealers' viability. In the USA, for instance, the nationwide dealers are collectively at risk for nearly USD 100 billion in inventory financing.[4] Furthermore, European Central Bank's "Euro Area Bank Lending Survey" shows a more difficult access to credits and an significant increase of average cost of loans as well as reductions of credit lines over the year 2008.[5]

Normally, ca. 200 dealerships go out of business per year in the USA; but over the past year, about 900 dealerships have discontinued operations.[6] Moreover, the National Auto Dealers Association (NADA) expects additional 1,200 dealerships will

Figure 1: Dealers and sales volume at risk – USA, Germany and Italy
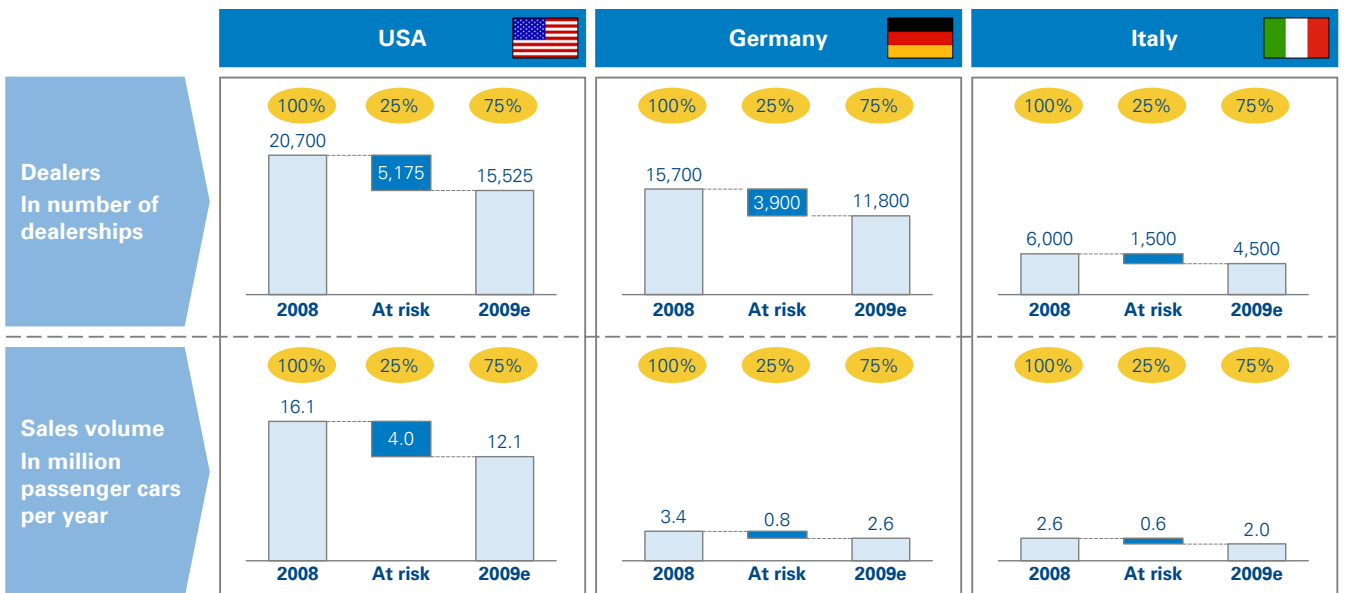
Source: National Automobile Dealers Association (NADA), Industry Analysis Division; Meunzel, R.M., Selzle, F.: Das Netz '08. In: Autohaus, 08/2008; IHS Global Insight (02/2009); Unione Nazionale Rappresentanti Autoveicoli Esteri (UNRAE): Italian Distribution of Dealers Network (2006); Arthur D. Little

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1   National Automobile Dealer Association (NADA) Industry Analysis Division
2   www.nada.org (03/27/2009)
3   IHS Global Insight World Car Industry Forecast Report, 12/2008

4   www.nada.org (03/31/2009)
5   European Central Bank: Banks Lending Survey, 01/2009
6   Automobilwoche, No. 1/2, 2009, p. 12.

go out of business in 2009.[7] In order to restore the availability of credit for the automotive retailing network, the NADA, the American International Auto Dealers Association (AIADA), and the National Association of Minority Auto Dealers (NAMAD) jointly consigned the so-called March 2 letter urging U.S. President Obama to revitalize the market for vehicle inventory credit and retail auto financing.[8]

Also in Europe, dealers are going bankrupt due to financial crisis: For example, even one of the biggest European dealer groups, Netherland-based Kroymans (importing Cadillac, Hummer, and Saab as well as representing Opel, Ford, Fiat, Nissan, and Volvo), filed for bankruptcy proceedings in March 2009.[9]

Loosing dealerships as sales outlets is obviously directly linked with the risk of a declining sales volume in the affected areas. Hence, assessing how many dealerships are threatened with failure is of high importance for car manufacturers and their national sales companies (NSC)/importers. From our project experience, one can expect about 25% (mature) and 35% (emerging markets) of dealers to be at risk of going bankrupt within the next 15 months resulting in a sales volume decline

of approximately 25% and 21% respectively. Figure 1 illustrates the dealers and sales volume at risk in absolute numbers by using the example of the USA, Germany and Italy. This means that in Germany about 3,900 dealerships representing a sales volume approximately 0.8 million passenger cars per year are threatened with bankruptcy in the near future or already have gone bankrupt.[10]

This implies a significant threat to the automobile sector in the USA, in Europe and other parts of the world – even emerging markets: Actually, Arthur D. Little was asked to conduct Dealer Risk Assessment in China. Hence, there is an urgent need for action.

The first move to solve the problem is to bring full transparency into the situation. Car manufacturers and their wholesalers have to estimate the presumable impact of dealer bankruptcies on their own business, and they also have to design various strategies to meet these challenges. Arthur D. Little's Dealer Risk Assessment methodology provides the answers to such questions.

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7   Reuters
8   www.nada.org (03/31/2009)
9   www.automobilwoche.de (03/31/2009)

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10   Percentage in emerging markets is lower due to smaller dealers with lower volume going bankrupt

Methodology

We suggest a systematic approach by analyzing data regarding dealers' financial situation in combination with liquidity projections and dealers' strategic importance to the car manufacturers and their local branches. Our approach is structured in three steps:

- Data Gathering and Static Risk Analysis
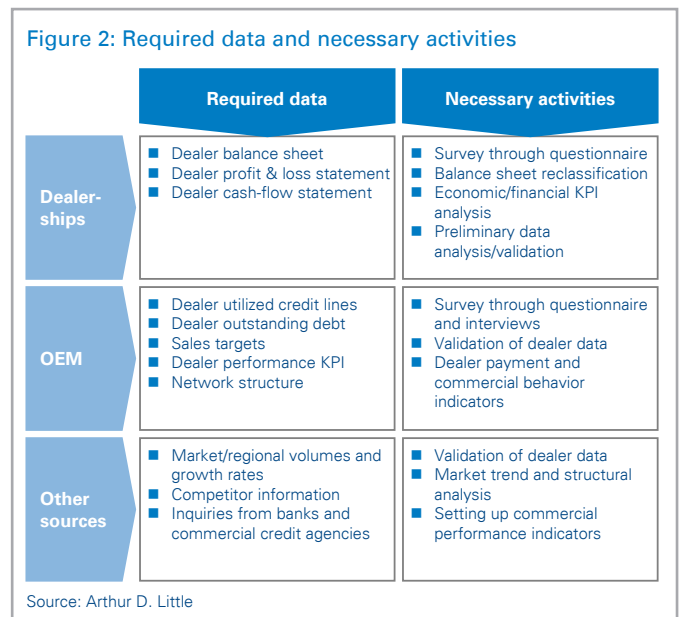- Dynamic Risk Analysis
- Contingency Plan Development

While the first two stages bear on risk assessment, the third one relates to risk mitigation and the identification of rough countermeasures applied to the most relevant dealerships. In order to deepen the retaliatory measures of Dealer Risk Assessment's stage 3, it should be followed by a Retail Profitability Optimization Program.

Step 1: Data Gathering and Static Risk Analysis

In order to gain a better understanding of the dealers' economic and financial situation data gathering must be conducted by obtaining data at three different levels: dealerships, original equipment manufacturer (OEM) itself, and additional third party sources.

First, dealerships' financial data are needed to conduct analyses on a sound basis. If no data comparable across all dealerships are at hand due to lax accounting regulations,[11] the balance sheet, profit & loss statement, and the cash-flow statement have to be collected by conducting a survey. A standardized questionnaire is used in order to ensure that all data sets have the same structure and hence can be processed automatically for analysis purposes. To ensure valid conclusions, data quality, i.e. accuracy and completeness, is crucial. Thus, especially in emerging markets data have to be validated through applying plausibility/cross checks as well as through drawing comparisons with data provided by commercial banks, credit agencies like the German SCHUFA, and other institutions such as the Chamber of Commerce in Italy (Camera di Commercio). In case of inconsis-tencies or discrepancies, the respective dealer has to be contacted for detailed explanation of the reported data.

Figure 2 summarizes the most important data needed and the activities to be conducted for a comprehensive Dealer Risk Assessment.

Figure 2: Required data and necessary activities

	Required data	Necessary activities
Dealer-ships	■ Dealer balance sheet ■ Dealer profit & loss statement ■ Dealer cash-flow statement	■ Survey through questionnaire ■ Balance sheet reclassification ■ Economic/financial KPI analysis ■ Preliminary data analysis/validation
OEM	■ Dealer utilized credit lines ■ Dealer outstanding debt ■ Sales targets ■ Dealer performance KPI ■ Network structure	■ Survey through questionnaire and interviews ■ Validation of dealer data ■ Dealer payment and commercial behavior indicators
Other sources	■ Market/regional volumes and growth rates ■ Competitor information ■ Inquiries from banks and commercial credit agencies	■ Validation of dealer data ■ Market trend and structural analysis ■ Setting up commercial performance indicators

Source: Arthur D. Little

Once data has been gathered, each and every dealer will be assessed regarding two major dimensions: financial strength and strategic importance. This allows to display the entire portfolio of dealerships under consideration along two axes in a so-called Static Risk Matrix (see figure 5).

Financial Strength

The analysis of a dealership's financial strength comprises of three aspects: the Altman z-score (model B for privately held non-manufacturing companies), additional key performance indicators (KPI), and the dealership's payment behavior.
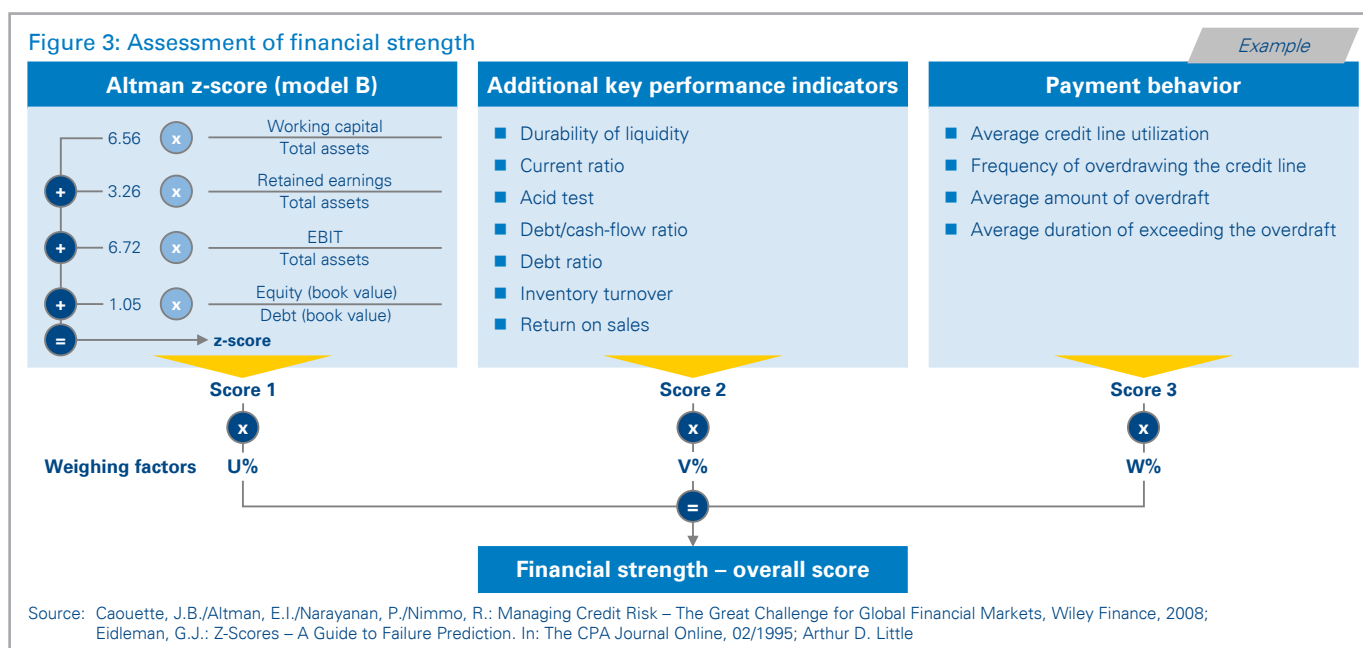
Edward I. Altman, a professor of finance at New York's Stern School of Business, developed and published the z-score formula in 1968. It measures the financial health of a company and indicates the likelihood of its going bankrupt within the next two years. Originally, its definition was based on a data sample obtained from publicly held manufacturers; but since it has been adapted to private manufacturing companies (model A) and privately held non-manufacturing/service firms (model B)[12]. Studies testing the effectiveness of Altman's formula showed evidence of its correctness in predicting the probability of

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11   This is often the case in emerging markets like China and Russia

12   Caouette, J.B./Altman, E.I./Narayanan, P/Nimmo, R.: Managing Credit Risk – The Great Challenge for Global Financial Markets, Wiley Finance, 2008

failure with a reliability of 72%[13]. The z-score equation (model B) including the relevant business ratios and their coefficients is shown in figure 3.

ratios such as frequency of overdrawing the credit line and average duration of exceeding the overdraft complete the financial strength assessment. The average score indicating the

Figure 3: Assessment of financial strength

Example

Altman z-score (model B)

$6.56 \times \dfrac{\text{Working capital}}{\text{Total assets}}$

$+\ 3.26 \times \dfrac{\text{Retained earnings}}{\text{Total assets}}$

$+\ 6.72 \times \dfrac{\text{EBIT}}{\text{Total assets}}$

$+\ 1.05 \times \dfrac{\text{Equity (book value)}}{\text{Debt (book value)}}$

$=\ $ z-score

Additional key performance indicators
- Durability of liquidity
- Current ratio
- Acid test
- Debt/cash-flow ratio
- Debt ratio
- Inventory turnover
- Return on sales

Payment behavior
- Average credit line utilization
- Frequency of overdrawing the credit line
- Average amount of overdraft
- Average duration of exceeding the overdraft

Score 1 × U%

Score 2 × V%

Score 3 × W%

=

Financial strength – overall score

Weighing factors

Source: Caouette, J.B./Altman, E.I./Narayanan, P./Nimmo, R.: Managing Credit Risk – The Great Challenge for Global Financial Markets, Wiley Finance, 2008; Eidleman, G.J.: Z-Scores – A Guide to Failure Prediction. In: The CPA Journal Online, 02/1995; Arthur D. Little

The Altman z-score is supplemented with selected key performance indicators that relate to liquidity and profitability of the dealership, e.g. current ratio and return on sales, and therefore are very commonly used for statement analysis. For each and every KPI value ranges have to be defined that allow for converting the KPI values denoted in different dimensions into dimensionless scores. This is necessary to transform the KPI values measured in different dimensions according to a uniform and hence comparable scale which, in turn, allows for calculating one single figure representing all additional KPI, i.e. a (weighted) average score. What KPI set is brought to bear and if and what weights are used to compute this average score depends on the specific market and company situation.

Since a dealer's payment behavior in the past reflects its ability and willingness to discharge the payment obligations, business

payment behavior is figured in the same fashion as described in the previous paragraph.

After having computed the same-scale scores for the Altman z-score, the additional KPI as well as the payment behavior, an overall score is derived from these "sub-scores" in order to determine the dealership's position on the financial strength dimension. Figure 3 recapitulates the approach to determine dealerships' financial strength.

Strategic Importance

The view on dealerships' strategic importance helps to understand to what extent the dealers are essential for the OEM's and NSC's/importer's business success and which dealers are really relevant to ensure sufficient market coverage. Three aspects are included in the strategic importance dimension: dealer positioning, dealer size, and the degree of its replaceability (see figure 4).

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13 Eidleman, G.J.: Z-Scores – A Guide to Failure Prediction. In: The CPA Journal Online, 02/1995
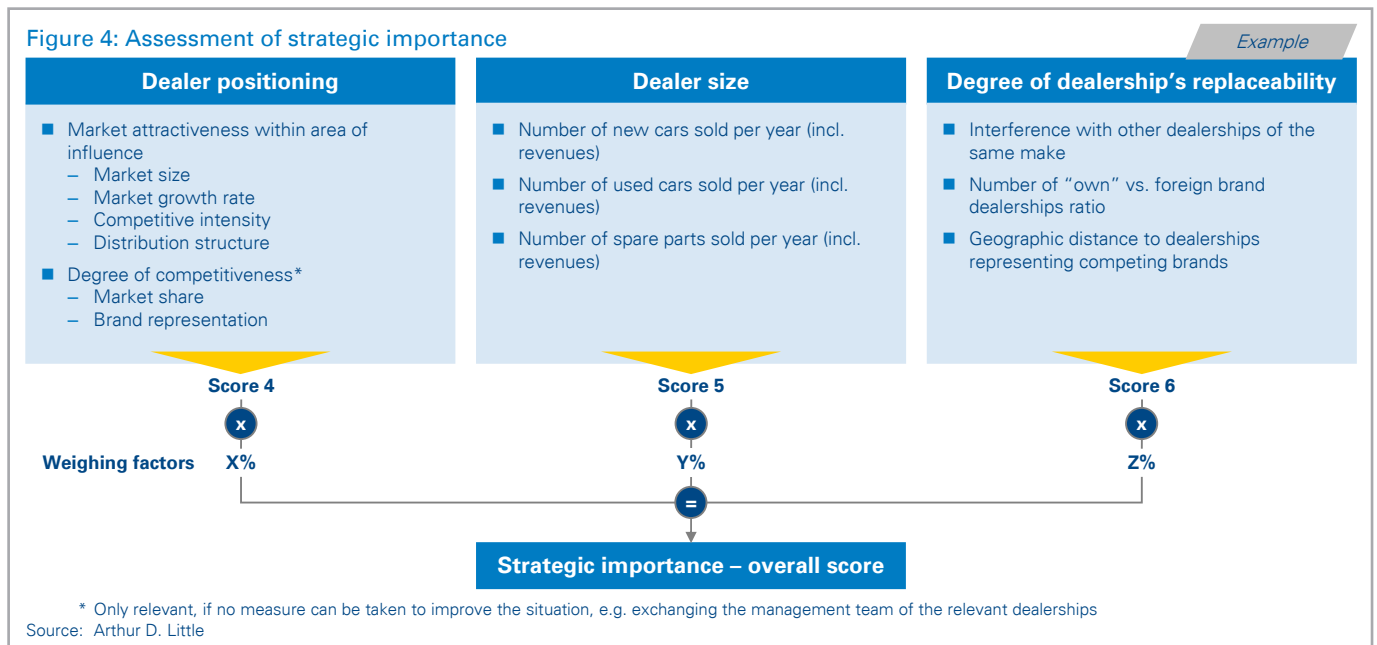
Dealer positioning measures how attractive the respective sales area of the dealerships under evaluation is. Moreover, it acts as an indicator of the dealerships' fitness to stand up to their competitors, if this fitness can be altered by taking adequate measures. In order to determine a score with respect to dealer positioning, the concrete KPI set, the relevant value ranges, and weights have to be defined while taking the market- and brand-specific situation into account. The calculation logic is for all three aspects of strategic importance analogous to the financial strength dimension.

The dealer-size aspect categorizes dealers in terms of their sales contribution to exploit the brand's market potential. Likewise, it indicates the potential risk of loosing sales volume in case of dealer bankruptcy. The higher the proportion of total sales in a certain sales area, the higher the score to be attributed to the relevant dealership.

Static Risk Matrix

As already mentioned, both dimensions, financial strength and strategic importance, make up the so-called Static Risk Matrix which is the main outcome of our methodology's first step. By being displayed in their respective matrix position, the dealerships are divided into six segments.

All dealerships showing strong financial conditions belong to the two Best in Class segments, regardless whether they are of high or low strategic importance. Due to their financial strength these dealers are considered to be suited as role models for the dealerships that are filed in the other four categories. Consequently, the measures addressed at these Best in Class dealers have to aim at enhancing the expertise transfer from them to the other groups rather than improving their profitability or liquidity management.

Figure 4: Assessment of strategic importance

Dealer positioning	Dealer size	Degree of dealership's replaceability

■ Market attractiveness within area of influence
  – Market size
  – Market growth rate
  – Competitive intensity
  – Distribution structure
■ Degree of competitiveness*
  – Market share
  – Brand representation
	■ Number of new cars sold per year (incl. revenues)
	■ Number of used cars sold per year (incl. revenues)
	■ Number of spare parts sold per year (incl. revenues)
		■ Interference with other dealerships of the same make
		■ Number of "own" vs. foreign brand dealerships ratio
		■ Geographic distance to dealerships representing competing brands

Score 4	Score 5	Score 6
x	x	x
Weighing factors X%	Y%	Z%

=

Strategic importance – overall score

* Only relevant, if no measure can be taken to improve the situation, e.g. exchanging the management team of the relevant dealerships

Source: Arthur D. Little

The degree of dealerships replaceability measures how dependent the OEM and the NSC/importer are from a single dealership in a certain sales area. The more dealers of competing makes and the less "own" dealers are active in a sales area, the less a dealership is replaceble.

The dealers featuring weak financial power in combination with strategic insignificance are called Slight Weaklings. They are unlikely to overcome the current crisis without intense external financial aid. But from an OEM's and NSC's/importer's perspective, these dealerships can be let sink or swim because they are strategically unimportant.

Similar holds true for the Sane Pawns (medium financial strength and low strategic importance) with the exception that they are financially stronger than the Slight Weaklings and hence are less vulnerable.

The dealerships that are very important from a strategic perspective while possessing a medium financial health we call Rainmakers – they are easy-care. Nevertheless, their financial performance should be strictly monitored in order to make out decreasing financial power at an early stage which is essential for being able to immediately react by initiating appropriate action. Otherwise, they could easily turn into High Maintenance Patients causing a lot of trouble due to their high proportion of total sales.

This latter cluster has to be brought into immediate focus. The High Maintenance Patients not only are likely to slump into a liquidity crisis but also bear a high risk in terms of sales volume to the OEM and NSC/importer.

Figure 5 is a simplified example of a Static Risk Matrix.

Step 2: Dynamic Risk Analysis

From the Static Risk Analysis we can learn what proportion of a brand's dealership portfolio is likely to run into liquidity problems. In addition to that, it allows to identify the dealerships that should be given utmost priority when taking safeguarding measures. But on the other hand it still remains unclear at what moments in time dealerships are expected to go bankrupt and how much money is needed to let them survive. Whereas the first issue that is left over by Static Risk Analysis is important for anticipating the magnitude of the decline in sales, the second is crucial for budgeting the supporting measures. The answers to these problems can be found by conducting a Dynamic Risk Analysis.

Based on various assumptions regarding factors that have an impact on future liquidity needs, the cash inflows and cash outflows are approximated (see figure 6).

For this purpose, the so-called indirect method of calculating the cash-flow is used: Starting from the net profit, the non-cash expenses and the potential for additional financing are added while affecting expenses are deducted resulting in the cash-flow. If this figure is negative, i.e. the dealership is loosing

Figure 5: Static Risk Matrix — Simplified example

Strategic importance (High / Low) vs. Financial strength (High / Medium / Low)

Rainmakers · High Maintenance Patients · Best in Class · Sane Pawns · Slight Weaklings · Dealer A · Dealer B · Dealer C · Dealer D · Area of focus
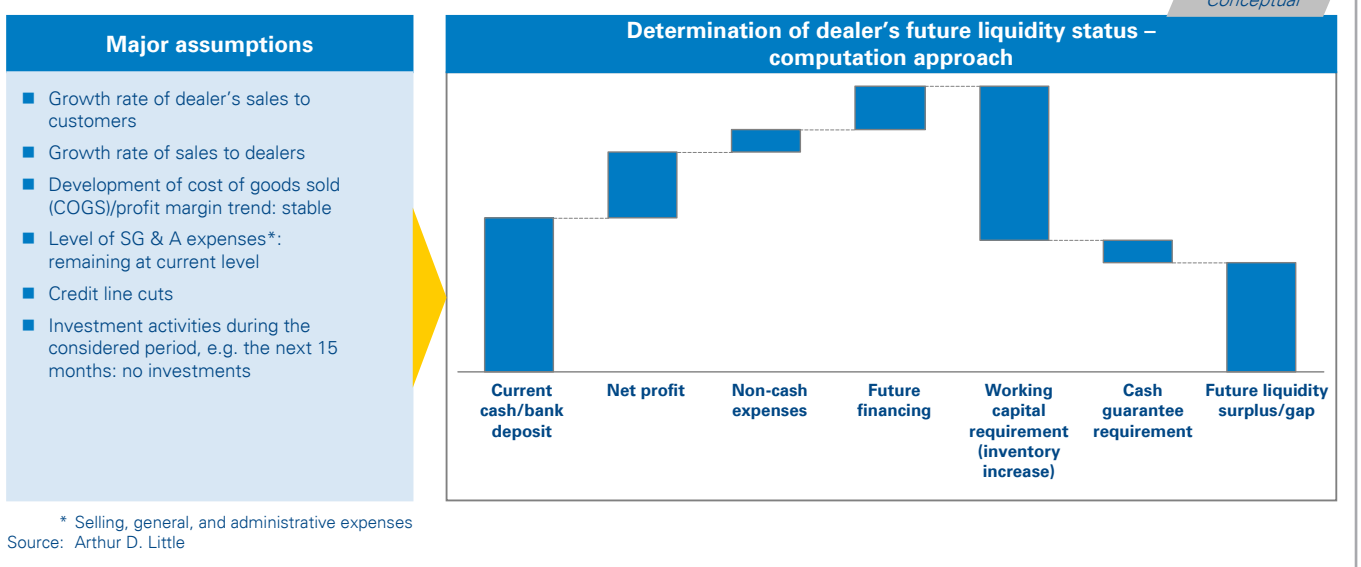
Source: Arthur D. Little
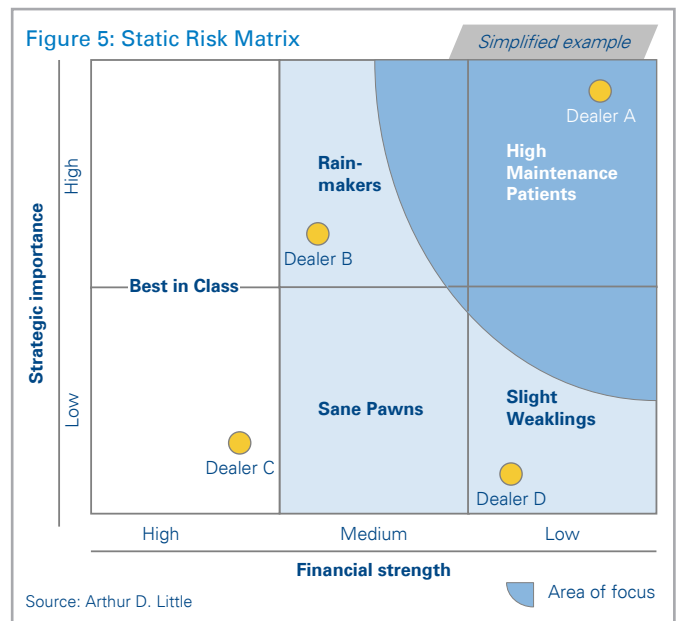
cash during the relevant period, and it exceeds the amount of cash plus the bank deposit at the beginning of this period, there is a future liquidity gap. This means the dealer is insolvent. Otherwise, the dealership has a liquidity surplus at its disposal.

This type of analysis is conducted for each and every prioritized dealer on a monthly basis over a certain time span, e.g. the next 15 months. With respect to some of the major assumptions like the growth rate of dealer's sales to customers and of its sales to customers different scenarios are derived from probable macroeconomic developments: Stagnation, Moderate Impact, and Deep Recession. The future development of a dealer's liquidity surplus/gap can be depicted as three curves – one curve for each scenario (see figure 7).

Typically, these lines should be above the x-axis which means that the respective dealership has enough cash to discharge all its payment obligations under the corresponding scenario, i.e. liquidity surplus. In figure 7, the red (Deep Recession) and the green lines (Moderate Impact) take course from the upper left to the lower right crossing the x-axis at a certain point in time (7th and 13th month) – turning from positive into negative values. Henceforward, the dealer's liquidity is insufficient to meet all payment obligations which means insolvency.
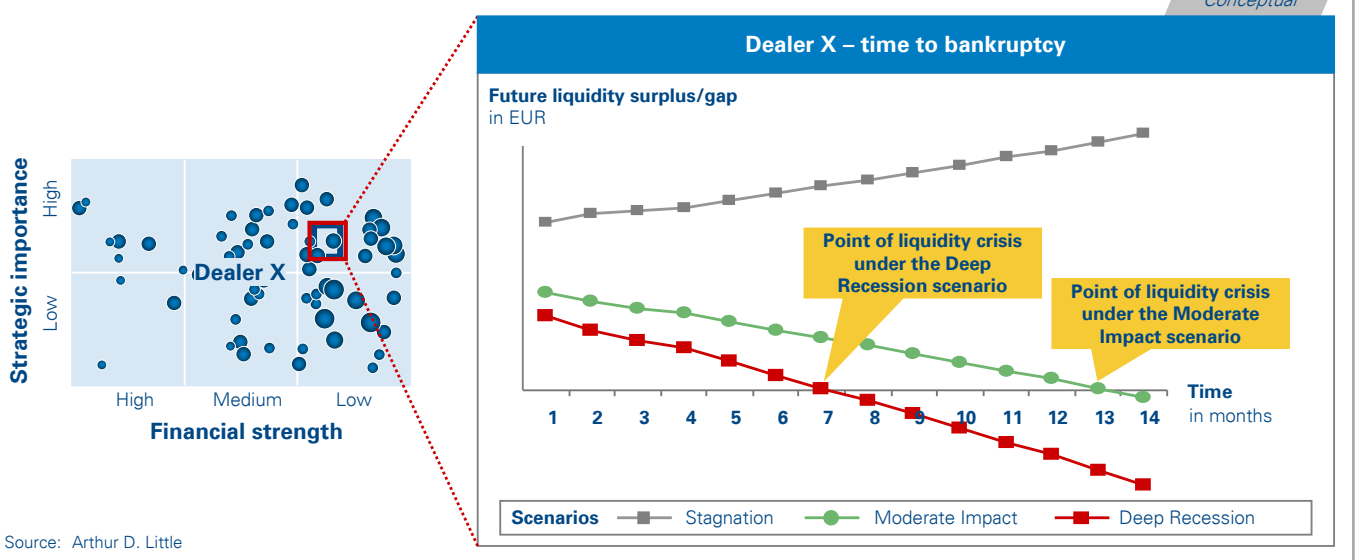
Figure 6: Simplified cash-flow projection model

Conceptual

Major assumptions

- Growth rate of dealer's sales to customers
- Growth rate of sales to dealers
- Development of cost of goods sold (COGS)/profit margin trend: stable
- Level of SG & A expenses*: remaining at current level
- Credit line cuts
- Investment activities during the considered period, e.g. the next 15 months: no investments

Determination of dealer's future liquidity status – computation approach

Current cash/bank deposit · Net profit · Non-cash expenses · Future financing · Working capital requirement (inventory increase) · Cash guarantee requirement · Future liquidity surplus/gap

* Selling, general, and administrative expenses
Source: Arthur D. Little

After having conducted such an analysis for all or a certain group of dealers, the results can be integrated into one diagram showing – depending on the assumed scenario – how many dealers are expected to slump into liquidity shortage in the period of interest. Since we now not only know the annual sales plan for these car dealers but also the estimated moment of their financial breakdown, we can easily calculate the sales volume at risk. Additionally, the sum of cash injections (theoretically) required to keep the endangered dealers in business can be derived from their projected liquidity gaps.

Figure 7: Liquidity forecast per individual dealer

Conceptual

Strategic importance (High / Low) · Financial strength (High / Medium / Low)

Dealer X

Dealer X – time to bankruptcy

Future liquidity surplus/gap in EUR

Point of liquidity crisis under the Deep Recession scenario

Point of liquidity crisis under the Moderate Impact scenario

Time in months: 1 2 3 4 5 6 7 8 9 10 11 12 13 14

Scenarios: Stagnation · Moderate Impact · Deep Recession

Source: Arthur D. Little

Step 3: Contingency Plan Development

Contingency Plan Development means to identify appropriate lines of attack for the different dealer clusters such as made up of High Maintenance Patients. It is intended for defining immediate actions to keep strategically important dealers in business without spending a lot of time for further in-depth analyses. Therefore, the contingency measures described here should be seen as quick wins and no-regret moves, but in order to achieve a solution that is sustainable in the long run one has to battle against the underlying root causes. For this purpose, the Retail Profitability Optimization Program developed by Arthur D. Little is the right instrument complementing the diagnosis of the Dealer Risk Assessment. This tool will be covered by one of our next reports which will be released soon.

On the grounds of the Dealer Risk Assessment, comprehensive financial data are on hand allowing for an evaluation of dealers' profitability besides their solvency. So, among the dealers being strategically important but short in cash, one can distinguish substantially healthy dealers from low performers. If a dealer is simply short on cash at the moment but its business operations stand on a solid ground, temporarily funding is a viable option. Typical examples of actions aimed at providing short-term liquidity are:

- Cash injections

- Review the interest free period on car purchase extent in parallel with increasing dealers credit lines

- Speed-up in liquidation of accrued bonuses and campaigns

- Promotion of agreement between "dealer associations" and banks to obtain more credit amount and better credit conditions reducing also the cost of loans.

After a cash injection the liquidity management should be tracked carefully to make sure that the funding helps the dealership to recover from an imminent or actual insolvency.

If, however, an insufficient business performance has let to the liquidity problems, more than providing additional cash needs to be done for recovery. In this case, the problem areas have to be carefully identified as a basis for further coaching. It might be necessary to exchange some positions or the entire management team of the dealer because these people typically can not look back on a pertinent track record. In less grave cases measures like the review of invoices payment plan, coaching and training activities to dealers and reimbursement plan of debt can be sufficient.

The key advantage of these measures is that they are mostly featured by low investment, valuable returns and high risk coverage; in fact, in exchange of the financial support dealers could be asked to provide additional guarantees in terms of covenants, capitalization increasing and commitment.

Conclusions and Benefits

The current financial crisis takes also its toll with respect to the car dealers around the world. After times of mounting operational cost and eroding dealer margins, the dealers now face funding problems additionally. Consequently, the risk arises that sales drops will be intensified by an increasing number of car dealer breakdowns. Our experience from projects in mature car markets has shown that about 25% of the dealerships that represent approximately 25% of the passenger car sales volume are at a high risk to go bankrupt. With respect to emerging markets even more dealers are likely to slump into a liquidity crisis.

In order to develop suitable strategies for coping with this risk, carmakers and their wholesalers need to evaluate this risk in a quantitative fashion. Otherwise, they will not be able to keep their position in the driver's seat regarding the shaping of the retail network; moreover, they will fall back into a reactive role.

The relevant dimensions for Dealer Risk Assessment are financial strength and strategic importance that are setting up the two axes of the so-called Static Risk Matrix. For the most important but unfortunately in financial terms unhealthy dealerships a Dynamic Risk Analysis has to be conducted. This is important for being able to determine the moment in time, a certain dealer will run out of cash and to forecast the amount of money to keep this kind of dealerships in business over a defined time period. The computations are based on assumptions that vary with scenarios regarding likely macroeconomic developments.

Based on the insights gained from these activities, the risk becomes very clear and dealers can be selected for certain archetypal countermeasures (quick wins) based on a prioritization. After having brought transparency into the current situation in a one-time effort, it is crucial to conduct Dealer Risk Assessment analyses continually like a Customer Satisfaction Index (CSI) scorecard. First, this ensures that the impact of the countermeasures can be tracked. Second, any changes in the situation can be identified early. Both, allowing for an effective loop control with quick response times.

For more detailed contingency measures a Retail Profitability Optimization Program is crucial. This identifies the concrete profitability improvement potential and the respective levers for all strategically important dealerships. One of the major outputs is to pull these levers according to a well elaborated action plan. Moreover, processes and the organizational structure within the retail network have to reflect the needs for Continuous Dealer Performance Comparison activities. These kind of activities identify the best and low performers along each business area of a dealer allowing for helping the dealerships lagging behind to learn from their high-performing peers and to take measures with the help of the wholesalers to reach better results.

Based on our project experiences, Arthur D. Little currently prepares a report on Retail Profitability Optimization and Continuous Dealer Performance Comparison which will be complementary to the diagnosis of Dealer Risk Assessment.

Contacts

Arthur D. Little

Arthur D. Little, founded in 1886, is a global leader in management consultancy, linking strategy, innovation and technology with deep industry knowledge. We offer our clients sustainable solutions to their most complex business problems. Arthur D. Little has a collaborative client engagement style, exceptional people and a firm-wide commitment to quality and integrity. The firm has over 30 offices worldwide. With its partner Altran Technologies, Arthur D. Little has access to a network of over 17,000 professionals. Arthur D. Little is proud to serve many of the Fortune 100 companies globally, in addition to many other leading firms and public sector organisations. For further information please visit www.adl.com

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