Purchasing: the impact of rising and volatile raw material prices

By: Martin Kahl

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Rising and volatile raw material and commodity prices are affecting every industry, from supermarkets to white goods, electronics and automotive. Materials suppliers struggle to make a profit; Tier suppliers and OEMs find themselves torn between raising prices and suffering the cost increases. Ultimately, it is the end-consumer who bears the brunt of increased finished product costs.

The automotive industry is particularly sensitive to price rises, especially in emerging markets and in budget and cost-sensitive segments, where the equivalent of a €200 or US$200 sticker price increase can stop potential buyers setting foot on a dealer’s forecourt.

Previously, end-product price increases caused by less frequent and less severe raw material cost increases were more readily accepted by consumers. Now, passing on prices to end-customers is harder than ever before: the price hikes are now steep, volatile and unpredictable; consumers are much wiser to strategic purchasing; and the multitude of ways vehicles can be purchased has brought with it a greater expectation of pricing. In turn, purchasing and product pricing issues have been elevated to the most senior levels of company management.

Behind price volatility lie a host of related and unrelated supply and demand factors. Stalled steel orders have caused global steel output to decline, depressing the price of iron ore and triggering a fall in the price of steel; as recently as the second quarter of 2011, the price of iron ore reached a record high - now its falling price has led to iron ore derivatives trading reaching a record high. Even in July of this year, Vale, the world’s leading iron ore manufacturer, said iron ore prices would remain above US$150/tonne for the next five years. Steel prices may currently be falling, but other factors could change this: according to the Financial Times, for example, Australian coking coal mines still recovering from last year’s floods are preparing for another meteorological onslaught. Coke is essential to steel production, so any threat to its availability could inflate steel prices. Weather is just one factor; another is the impact of market performance on demand, as illustrated by the Eurozone crisis, ongoing negative manufacturing news from the US and a slowdown in the Chinese market.

After rising dramatically in the last year, rare earth metals pricing is currently in turmoil; the record high price that copper reached in mid-2011 has been in decline recently; and there has been some respite in other raw material prices too, raising hopes of an easing of the purchasing cost burden. But even these recent falls illustrate the real problem for the industry - it is not just the rise in prices, but the volatility of the prices.

Such uncertainty is leading to a new approach to purchasing that includes examining all sources and resources, and evaluating purchasing strategies, volumes and frequencies. It has even led to a new way of trading, adding a further dimension to price volatility. As a result, there is a growing acceptance amongst OEMs that they need to work more closely with suppliers from the very early stages of product development.

One thing is clear: we’re in this for the long-haul, and the current elevated cost structure is the new normal, not just a blip.

We’re all in this thing together
AutomotiveWorld.com investigated the impact of rising material prices on the automotive industry, and spoke to a range of players across the supply chain, with often surprising outcomes. One overriding theme was the reluctance of senior industry executives to speak on the record about this issue, highlighting its commercial sensitivity.

Marco Foley from 652south Ltd, a specialist brand communications consultancy to the automotive industry, is unsurprised by the senior executives’ reticence. “This is a delicate matter for any organisation in the automotive industry to discuss publicly. Tier is especially are getting squeezed from both sides as sub-suppliers struggle to maintain their margins and vehicle manufacturers fight to gain market share by increasing customer value or reducing pricing. Managing the challenge of rising commodity prices in addition to this involves negotiating an often difficult tightrope between these two partners
with conflicting interests. Typically, the less each knows of these efforts with the other, the more manageable this tough but essential process is likely to be.”

**Raw material prices - the only way is up**

That prices are rising, and negatively impacting the automotive supply chain, is undisputed. Michael Schwartz is chief marketing officer at Triple Point Technology (TPT), a supplier of trading and risk management solutions for commodities. “We are experiencing historically high commodity prices together with unprecedented levels of volatility. It’s a common theme echoed through industry that rising input prices mean rising output prices and tighter squeezes on profit margins. Not all costs can be passed on to consumers through higher prices.”

This means “that commodity costs and how they are managed are fast becoming a CEO/CFO issue,” says Schwartz. “Purchasing a bulk order of steel at the wrong time can send corporate earnings into a tailspin. At that point it becomes a shareholder issue and commodity purchasing moves firmly into the purview of the board.”

Tim Boven is the global product director for Dow Automotive’s Adhesives and Performance Solutions portfolios. “There are many similarities between 2011 and the cost escalation we saw in 2008, at least from the way the hydrocarbon market has shaped up, although the dynamics driving that rise and cost are different. The price of oil has been very resilient to coming down, and for most of this year it has been above US$100/barrel. That is precipitating the prices in ethylene, propylene and other key raw materials that we need to produce our products. The closest we got to this is 2008.”

Rising material costs have also hit the coatings industry, says Jim Rees, managing director of AkzoNobel’s Automotive & Aerospace Coatings (A&AC) division. “The coatings industry has been broadly affected and of course, we have been affected, and we’ve talked about it openly to the markets. We’ve seen quite a dramatic rise in raw material prices in recent periods, particularly as we came out of the global recession. Our [AkzoNobel] combination of innovation, our focus on sustainability and renewable materials, and our partnership with our key suppliers, all underscored by our scale as the largest coatings company in the world, puts us in a pretty strong position. But that still doesn’t take away the fact that, yes, we’ve certainly seen pressure on raw materials.”

**The price you pay**

At the Geneva motor show in March 2011, Dr Dieter Zetsche, chief executive, Daimler AG and head of Mercedes-Benz Cars, discussed the impact on the industry of the combination of spikes in oil prices and volatile commodity prices. “We told the financial markets at our annual press conference that Daimler as an entity will see an increase in raw material prices in 2011 of about €700m (US$963m) versus 2010. Some smaller parts of our business, like some Freightliner contracts, have an accelerator so that they automatically adjust in line with steel prices, but that’s the exception. On the car side there is very little chance to pass over what comes in from the raw material side.”

A similar year-on-year increase in purchasing costs is anticipated by Yannick Bezard, head of PSA Peugeot Citroen’s Purchasing Division: “In the figure we gave with the first half financial results, the purchasing budget for the full year 2011 will be €700m higher than 2010.”

TRW reported a year-on-year decline in operating income in its Q3 2011 results, citing the negative profit impact from higher raw material prices. Continental has talked openly about the impact of material prices on its business. In March 2011, it announced that it would raise its European replacement light truck and passenger car tyre prices from May 2011 as a result of rising raw material costs. Winter tyre prices were increased by 8-10%, and summer tyres by 5-8%.

In its Q3 2011 results, Continental highlighted what executive board chairman, Elmar Degenhart, referred to as “the higher-than-expected burden we are experiencing from...increasing raw material costs.” Specific examples given include the rising cost of synthetic rubber, which is forcing the company’s Rubber Group to deal with an increase of more than €900m in raw material costs in the current fiscal year instead of the previously anticipated €850m; and rare earth, which has burdened the Automotive Group “with additional costs totalling a maximum of €50m in the fourth quarter as a result of the recent spike in rare earth prices.” For example, Degenhart said the cost of dysprosium, which is used in manufacturing magnets for electric motors, has risen nearly twentyfold over 12 months.
What a difference a year makes

In early 2011, the prices of some key materials, including iron ore and rare earth metals, appeared to be reaching impossible levels; as mentioned above, certain material and commodity prices are currently retreating.

“Commodity prices have become increasingly volatile,” says Dave Andrea, senior vice president, Industry Analysis and Economics at the Troy, Michigan-based Original Equipment Suppliers Association (OESA), an organisation which represents the interests of around 400 members, mainly Tier 2 and Tier 3 suppliers. “The most volatile have been rare earth materials that have increased three to four times within a six month period affecting everything from electric motors to front facia finishes. However, core materials - such as steel, aluminium, copper, resins, rubber and the like - have also been trending upward. Basically, global demand for all commodities took off before production capacity came back online. And it’s not just price, but about availability at any price.”

Tim Boven of Dow Automotive explains the impact of volatile raw material prices on his business. “Propylene has escalated up to 40% and even 50% at times. There has been a little relief lately, but nevertheless the price points of key raw materials like propylene and ethylene are at an all time high. This is directly related to the cost of energy and oil. It impacts everything that we do, from production, to shipping and to running our plants. The changes in hydrocarbons and the changes in energy costs are unequivocally having an impact on our business.”

According to PSA’s Yannick Bezard, “All the listed materials are affected. A newcomer in the discussion now is rare earth, which we use more and more in electric motors as we go towards hybrids and electric vehicles. We are switching from a few grammes per car to 100g per car. It’s going to cost us a lot, and we have seen some rare earth export prices from China multiply by five, six or ten times.”

Rare earth? It’s not so rare...

The issue of rare earth pricing arises in any discussion about rising material costs. Currently in decline after a seemingly endless series of month-by-month increases, the overall impact on the automotive industry of rare earth metals price rises remains unchanged. As mentioned above, spikes in rare earth pricing will add €50m to Continental’s Automotive Group’s Q4 2011 costs. Speaking to AutomotiveWorld.com in mid-2011, Laurent Bresson, vice president, Global Sales & Marketing and European Region at Tier 1 supplier Nexteer, cited the difficulties that rare earth prices have caused his business, at a time when the product area that is booming for Nexteer, electric power steering (EPS), depends on rare earth. “Take one example that is impacting us on EPS: the price of rare earth materials. Demand is much higher than supply. As a result, we have seen over the past six to nine months an increase up to 700% on some of these materials. The impact is massive. Our first priority is to protect supply, because the demand is high and the number of mines is very limited. The first priority is to secure supply, but at the same time, like any other supplier, we have to find a way to pass it to our customers.”

The volatility of rare earth materials pricing is proving untenable for PSA. “The price of rare earth has shot up so much that we are going back to previous materials for electric motors, so that we can avoid the on-cost,” says Bezard. However, despite its name, the price rises hinge not on physical availability, but on control of supply: “Rare earth is not that rare! There is no availability problem for rare earth, so it’s not a question of securing supply. It is a question of the price being much more expensive if you export the raw material outside China. The export prices are disincentive to encourage industries to localise more added value close to or in China. It’s more industrial policy than commercial. If we are able with our suppliers to localise more added value close to China, then we get a better price for rare earth.”

Product development - let’s work together

Tim Boven of Dow Automotive highlights the importance of suppliers being brought in as early as possible into their customers’ product development. “If we can get involved very early in the product development cycle, and understand their needs and requirements, we can start putting energy behind our product development to meet those needs. At the same time, when we have a strong partnership with our customers, which we strive to do, we can start providing input to help develop a product at a lower cost. We strongly desire to get in early, because that is where the opportunity lies to mitigate as much cost as possible.”

PSA’s strategic supplier strategy is one such example of closer co-operation between OEMs and suppliers. Indeed, PSA has been increasingly vocal about the need for suppliers, in particular steel suppliers, to co-operate more closely with it on product development.
Passing on the cost is unavoidable - someone’s got to pay
Dow Automotive delivers products across the automotive value chain, with a customer base which consists of Tier 2, Tier 1 and OEM customers. Tim Boven says it is impossible to avoid passing on the costs. “Cars will ultimately have to be more expensive,” he states. “The rising cost of hydrocarbons is forcing us to pass portions of these costs on to our customers. All material suppliers in a similar position to Dow are forced to pass these costs on to their customers. We have to share this new cost structure across the entire value chain, which starts with Tier suppliers like Dow and goes all the way up to the OEM.” He adds, “There is absolutely no single point in the value chain that can sustain all these costs and expect to have a long-term enterprise.” One way around this problem, he says, is an increasingly close product development relationship between suppliers and customers. “A significant approach to that is close collaboration with our customers and suppliers to mitigate these costs if that is possible, and on the customer side, work with our customers to pass on the costs in a reasonable fashion.”

Nexteer’s Laurent Bresson agrees. “There is no way for any supplier to survive longer term without passing in either direction the raw material evolution costs to our end customers. It is a very delicate subject. Our customers have to have competitive cars, and they have a hard time increasing their prices. They want to protect their market shares. We do have to find ways to pass it to the customers, and of course our purchasing organisation is also negotiating with suppliers.”

So what can a Tier 1 supplier do to defend itself against such pricing uncertainty? “We have to differentiate between acceptable, normal raw material evolution, which you can manage by working with suppliers and customers,” says Bresson, “and other exceptional conditions that make the whole thing unmanageable unless you pass on 100% of the cost. Our customers will have to increase the price of their cars.”

According to the OESA’s Dave Andrea, “There is tremendous pressure to hold prices in check. More contracts are being written with escalation/de-escalation clauses to adjust material pricing back to the point when the original contract price was determined. The large Tier 1 suppliers historically have been a buffer in the system, absorbing raw material cost increases they gave to the smaller firms but were not able to pass along to the vehicle manufacturers. But those days are past.”

From an OEM perspective, however, passing on the costs to the customer is the absolute last resort. PSA’s Yannick Bezard: “We try to resist doing this. We have to work with our Tier One suppliers to avoid getting 100% of the impact on our side. An additional €500-600m on the purchasing budget could work out at €200 per car in terms of cost. As sales people, we will never be able to pass €200 more on to our final customers. We have to share the burden with our suppliers.”

Paul Philpott is chief operating officer of Kia Motors Europe. As a brand in transition, shedding its budget image and reputation, he says Kia is in a good position to handle the impact of material price increases. “In terms of raw material price increases, our new products come just at the right time for us. We have to get away from the low end of the price spectrum. Therefore, the output of better, more European taste-driven design, better quality of cars, better engineering, stronger brand, means that we can take prices to a level equivalent to our competitors. We don’t need a 10% discount versus our competitors, and therefore we have more revenue to offset any material cost increase. That is from a business, sales and marketing position. These raw material increases come at a time when thankfully Kia is replacing many of its key models. If you are just going into the second half of a product cycle, and you then face major increases on your raw material costs, the impact is much greater.”

In for the long haul
There is a consensus that the current price levels for raw materials are the ‘new normal’. There may recently have been some easing of prices, but over the long-term, the industry is bracing itself for the long haul.

“From our perspective,” says Tim Boven of Dow Automotive, “this appears to be the new norm. We are going to be operating under this escalated cost structure for many years to come. It is something that the industry has to rally around to address, and we think the way to address this is through innovation. So from our perspective, yes, we are planning for the likelihood that the cost structure we are operating in 2011 will continue for the foreseeable future.”
PSA’s Yannick Bezard agrees with Boven’s earlier comparison of prices now and the levels they reached during the global economic crisis of three years ago; he also expects the new price structure to remain in place. “What we have seen in 2010 and 2011 is that prices have recovered from the crisis at the end of 2008 and 2009. Right now we see a slight price decrease, but it is in dollars, and at the same time the Euro is weak against the dollar. So the decrease is not that much, and we see it being quite flat over the next few months. All the emerging countries are still pushing very hard, and as the market is good in Brazil, Russia, India and China, I do not see a reason for a huge decrease in raw material prices. So we have to live with that. Maybe we use materials or grades of materials like aluminium and plastics which are too expensive for our cars, and we have to find new materials.”

The need for innovation...

One solution for suppliers to escape the confines of rising and volatile material prices is to innovate their way out. Indeed, rather than seeing high and rising prices as a problem, Boven says they present a welcome challenge. “It creates opportunities for us. It drives our innovation pipeline to develop products that can substitute more expensive products in the industry to help customers be successful and mitigate the costs that they are seeing.”

…and a new approach to automotive purchasing

Another solution is to rethink the automotive industry’s approach to purchasing. According to TPT’s Michael Schwartz, “Automotive companies have some of the most diverse and complex procurement portfolios, which represent equally complex supply networks and a broad series of commodities markets - any one of which can be experiencing severe volatility at any given moment.”

The choice, he says, “is stark, but clear: continue to purchase commodities passively as just another link in the supply chain and be vulnerable to huge commodity price; or adopt a proactive approach to commodity procurement that utilises solutions that enable more accurate forecasts and protect the bottom line.”

By using the “right approach, tools and risk management set-up”, vehicle manufacturers can take control of their commodity supply chains. Fail to do this, says Schwartz, and “that’s when the commodity supply chain controls you.”

Dave Andrea of the OESA says the impact is being felt all the way down the line. “The impact is significant throughout the entire supply chain. Larger Tier 1 suppliers may be protected buying steel and other widely used materials through customer re-sale programmes [where OEMs buy in the largest quantities possible, passing along price discounts to suppliers]. Even for steel, however, the contracts are getting shorter and shorter, providing less price stability quarter to quarter. That adds risk to the industry. As you move down through the supply chain, suppliers of discreet components like fasteners might have 60% of their cost structure tied to steel, but don’t have the luxury of buying their steel through a customer re-sale programme. These smaller suppliers are at the greatest risk.”

As far as TPT’s Michael Schwartz is concerned, “It’s no longer prudent to see commodity purchasing as anything other than a financial function. Passively procuring commodities as just another link in the supply chain has become a high-risk activity. What is needed now is active management to make the most of the commodity markets and protect earnings.”

A change in strategy would mean a change in mindset, a complete rethink of the way the industry operates - but this is essential for the future success of the automotive industry, says Schwarz. “For years, the world’s most successful energy companies and global commodity houses have relied on sophisticated commodity management platforms that enable them to proactively manage purchasing, demand/supply balancing and risk management of raw materials and financial derivatives. These systems also provide logistics tools, accounting and decision support that create a complete commodity management platform that enables companies to optimally balance between cost, profit and risk. Automotive manufacturers and suppliers are now recognising that these same systems can help manage raw material risk and preserve profit margins in the face of today’s unprecedented commodity volatility.”

Supply contracts - check the small print

The type of contract agreed between supplier and customer is changing, with all parties re-examining the small-print, or replacing outgoing contracts with all-new agreements.
Steel provides a clear example of the importance of contract negotiations. Due to the high volumes in which steel is purchased, a key issue for OEMs is the length of supply contracts. Traditionally annual, these have become shorter. Already in 2010, there were reports of steel suppliers looking to move away from fixed-price contracts with vehicle manufacturers due to the volatility of iron ore prices. In September 2010, Brian Aranha, ArcelorMittal’s head of Automotive, and global chief marketing officer told AutomotiveWorld.com that in the automotive industry, ArcelorMittal has historically “operated annual price and volume contracts. Given the volatility of raw material pricing, we now have a mix of contracts because the competitive dynamics have changed.”

PSA’s Yannick Bezard gives the OEM take on such negotiations. “If you take steel, for example, we used to have annual contracts. In 2010, we were under high pressure to reduce the visibility in our contracts to six months. For steel, we now discuss the prices per semester. Given this poor visibility, it’s not that bad. If I were to negotiate the price of steel for the full year 2012, I’m not sure I would be more comfortable than just discussing the price for the next six months and then waiting to see if the price goes down. We are negotiating within our visibility. Of course, we cannot switch our contracted volumes at short notice from 100% to zero, but at six months’ notice we can make some adjustments.”

The potential for OEMs and suppliers sharing the cost burden varies with the numerous types of agreements in place. “We have several types of agreement,” says Bezard. “In many cases it’s shared fifty-fifty, in some cases it’s two-thirds-one third. For listed materials, it’s more difficult - prices are index-linked and we get 100% of the impact.”

**What can companies do to protect themselves?**

Commenting on what the OESA’s members can do to protect themselves against rising and volatile material prices, Dave Andrea says, “Contracts for all materials are getting shorter, exposing suppliers to greater uncertainty quarter to quarter. In the short term, it’s about writing purchase contracts that adjust for material cost changes, financial hedging if there are financial markets, or physical hedges if not. Longer term, it’s about designing volatile materials out of the product, validating multiple materials so substitution becomes possible and simplifying specifications so that suppliers can procure materials from a wider range of material providers. All suppliers are keeping material inventories tight. This is particularly the case with smaller suppliers who, with rising material costs, can easily bump up against lines of credit limits.”

Jim Rees, of AkzoNobel A&AC, believes the way to manage the challenge is through a combination of innovation and supplier relations. “It’s driven by innovation and it’s driven by the materials we use and how we use them. Next to that, it’s driven by the partnership relationships we have with our suppliers and the way we stay close with our customers. Therein lies the balance - we try to manage it effectively by recognising that there isn’t any one thing you can do here to make it right. It’s not a matter of simply accepting price increases, nor is it a matter of simply passing on the price increases directly. The way we manage it and balance innovation and the right partnerships is what makes it work.”

Large OEMs often enjoy the luxury of vertical integration of suppliers. Allan Rushforth is chief operating officer and senior vice president, Hyundai Motor Europe. Crucial to Hyundai Motor Company (HMC) is the inclusion within HMC of a steel manufacturer, which will help the company to control the costs of one of the most important materials in its passenger cars. “We are highly focused on the fact that price pressure on commodities is going to affect us, as it will affect everyone else,” Rushforth told AutomotiveWorld.com earlier this year. “We are fortunate in that we have Hyundai Steel, which helps us in terms of managing our steel price.”

Kia Motors Europe’s chief operating officer, Paul Philpott, concurs. “In terms of rising raw material costs, Kia globally is taking some strong steps to take control of some of the raw materials. For example, the Hyundai-Kia Group has a major steel plant that provides most of the steel for our cars. If steel prices go up, we have some control over that.”

Laurent Bresson again provides the Tier 1 perspective. “There are short term and long term actions. Long term, you look at your entire supply chain: where are your Tier 2 and 3 getting materials? Is there a better way to get it? Then you look at design to see if there is a way to reduce the impact of these materials. But this is very long term - you do not change your design in the short and medium term. Right now, everyone is struggling to make sure we can supply enough parts to the customers. There is so much speculation right now on raw materials, we have even found ourselves paying cash in advance to assure a supply of raw materials. It is a very, very exciting and challenging issue to deal with.”
The legal perspective
Jayne Hussey, partner at Pinsent Masons LLP, says the legal entitlement a supplier has to raise, at short notice, the price of a product on which a customer - or even a supply chain - depends, hinges “on the nature of the contractual relationship between supplier and customer. If products are supplied on an order-by-order basis, the supplier is free to decline to supply any new orders received unless the customer agrees to revised prices. However, if the supplier is supplying on the basis of a long term supply contract and or pricing agreement, the supplier’s ability to increase prices for the remainder of the contract term will depend on the terms of the contract.”

A contract lost due to financial pressures caused by rising material prices can have serious implications, including redundancies and bankruptcy. “If a company cannot honour its contracts,” says Hussey, “it will be susceptible to termination and resultant damages. The company should look at its customer contracts to determine to what extent it can pass on the increased prices. It should also discuss the situation with its customers. It may be that a commercial solution can be achieved whereby, for example, customers agree to purchase the materials and supply it to the company in return for reduced prices.”

Ultimately, the type of contract entered into by both parties decides how the situation develops in the event of sudden, sharp and volatile price rises. “Long term supply contracts which give price certainty - ideally fixed prices - should be negotiated and entered into. If the buyer can’t achieve fixed prices, a clear price increase and decrease mechanism should be included in the supply contract so that there is clarity on how any price increase will be calculated.”

In short, the outcome lies in the wording - and interpretation - of the small print of the supply and purchasing contracts. “Properly drafted supply and purchasing contracts will give the business certainty as to what will be supplied, when, and at what price. It will also include escalation mechanisms for dealing with price increases, or it can fix prices completely.”

Martin Kahl is Features Editor at AutomotiveWorld.com. editorial@automotiveworld.com