

MRO Industry Landscape 2011: A touch of optimism sprinkled with a dash of caution

In its annual MRO Survey, Oliver Wyman recently surveyed over 120 airline, airline MRO, independent MRO, and OEM executives to gauge their views of the aviation MRO market. In our global respondent pool, over 74% held Director or higher titles in their organizations. This year's responses came from businesses of all sizes—from less than \$50 million to over \$5 billion in revenues, but were focused heavily on companies in the latter size category.

As economies continue to recover from the worldwide recession that struck in 2008, the maintenance, repair, and overhaul (MRO) industry is stabilizing—though still facing challenges. MROs are operating today against a backdrop of uncertainty in fuel prices and the effect fuel could have on aircraft utilization and the active fleet. But against this backdrop, signs of renewed health have appeared on the horizon. Examples include rising capacity utilization and an easing up of headcount reductions in MRO workforces. In addition, MRO executives' focus has shifted. Instead of concentrating on merely surviving an economic tailspin, executives are seeking to fuel fresh growth through organic strategies (including performance improvement, capability expansion, and deeper repair development). Interestingly, M&A is back on the executive radar screen as a growth strategy, after a three-year hiatus. And many MROs—recognizing the growing competitive strength of commercial aviation original equipment manufacturers (OEMs)—are aligning themselves with OEMs to grow revenues as well as secure their place in the aftermarket. It's a complex picture, to be sure. But tempering optimism with caution seems wise, given the crosswinds in store for MROs this year and for the foreseeable future.

The MRO Industry: Stability Returns

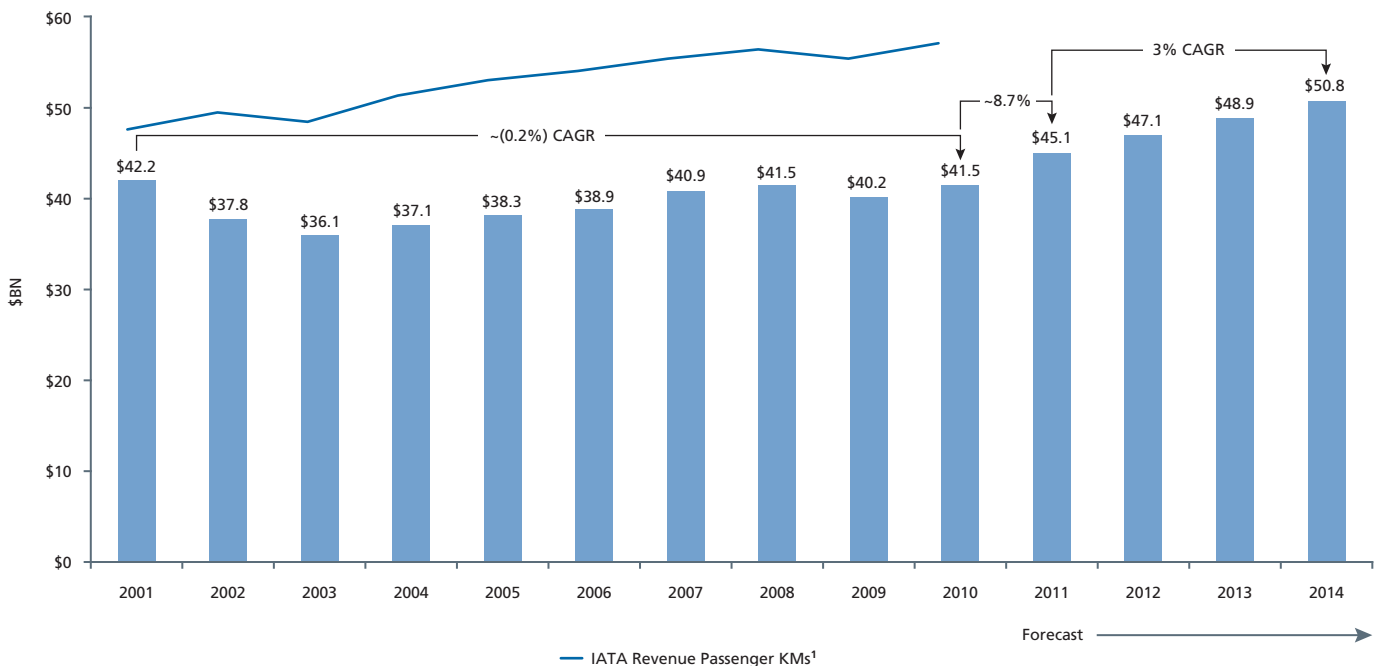
The aviation maintenance, repair, and overhaul (MRO) market is poised for recovery in 2011. The industry is seeing a return to stability after the worldwide recession that struck in 2008. During the global downturn, carriers were forced to rationalize capacity; in particular, to park older-generation aircraft. These effects led to a market contraction in 2009 and only modest growth from this depressed state in 2010. In 2010, the market simply returned to 2008 levels, and had still not yet reached levels that were attained in 2001, before the previous global recession.

Our research suggests that from 2010 to 2014, the global MRO market will grow from roughly \$41.5 billion to about \$50.8 billion, or a 5.2% compound annual growth rate (CAGR) over the period. A significant portion of this growth will come from what we believe will be an approximately 9% “bounce” from 2010 to 2011. Forces behind this bounce include post-recession activities such as restocking of inventories that were burned off during the downturn, spikes in time-based maintenance where “green time” has been completely exhausted, growth of actual MRO activity in quickly emerging

markets, increases in ASMs that are driving cost-per-hour programs, and investments in cabin and aircraft modifications that were largely deferred during the recession. Beyond the 2011 bounce, we see the industry returning to a more “normal” 3% CAGR through 2014 (see Exhibit 1).

Geographically, North America and Europe will remain the largest MRO markets, representing over 57% of the total market in 2014. However, this number will be down from 62% of the total market in 2011. We attribute this decline in relative share to significant growth in the Middle East (8.5% CAGR), South America (5.6% CAGR), and China (11.1% CAGR). Growth in these quickly emerging, or now fully emerged, markets will increase the markets’ relative share of global MRO spend from 16.3% of the global market in 2011 to 20.3% of the global market in 2014. While fleet growth in these emerging geographies has been buoyant even through the recession, we now expect MRO activity to reach more significant levels as fleets age. These trends have been forecasted for years, but the coming four to five years should see realization of this promise for providers. Those that have made appropriate investments should now be poised to reap some of these benefits.

Exhibit 1 Historical and forecasted commercial aviation MRO expenditure



Source: ACAS, IATA, Aero Strategy, Oliver Wyman analysis.

¹ Revenue Passenger KMs = number of paying passengers X kilometers flown.

We believe that the industry has stabilized, and MROs and OEMs that we work with are anticipating better days ahead. Having said this, any expectation that the industry will grow out of this recession with exuberant celebration is likely premature. For example, independent MRO margins will continue to come under pressure through various OEM licensing fees and pricing increases above the PBH price-escalation allowances.

Headwinds Could Be Stronger Than Anticipated

While the MRO industry is seeing encouraging signs of recovery, any true improvements in the industry's prospects must be viewed as fragile. History has made this all too clear. Consider the role of volatility in jet fuel prices, air traffic, and gross domestic product (GDP) in shaping and reshaping the industry's health.

For example, in February 2008, air traffic growth began contracting after oil prices hit \$100 per barrel, even though oil prices did not hit their peak (\$130 per barrel) until June 2008 (Exhibit 2). During this time (as in the recession of 2001-2002), carriers parked a significant volume of mainte-

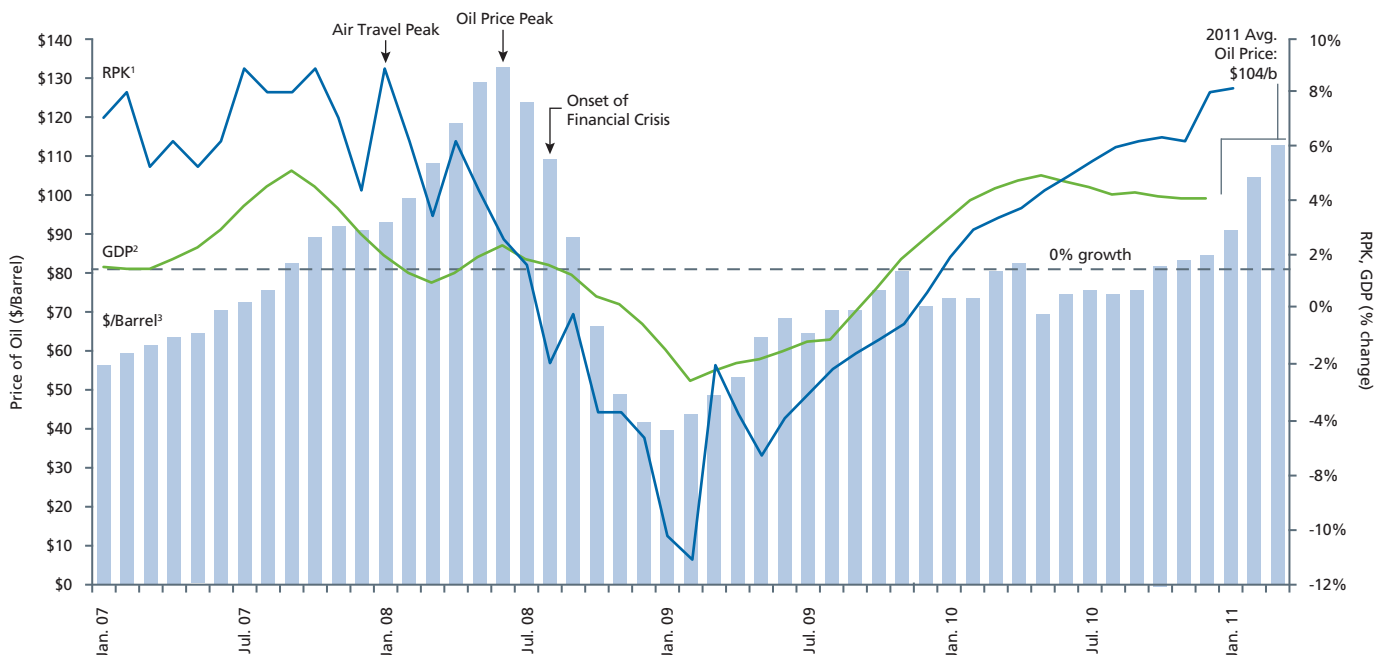
nance-heavy older aircraft and did not anticipate returning them to service (Exhibit 3). Demand for air travel had no opportunity to recover with the decrease in oil prices that occurred as the recession tightened its grip.

Today, similar trouble may be looming on the horizon. As oil prices rise above \$100 per barrel again, owing in part to the escalating instability in areas of the Middle East and Northern Africa, costs will increase for all carriers (passengers and freight). As costs rise, capacity discipline (which has been held generally firm across the globe already) and pricing pressure on MROs will remain intense. Given that the fortunes of MROs are so inextricably linked to those of their customers, such trends will bear careful watching over the coming months.

Capacity Utilization is on the Rise

MRO facilities, in all geographies, are seeing capacity utilization increase—in some cases dramatically (see Exhibit 4). This increase is attributable to the growth in the overall market, the bubble that the industry is generally currently experiencing, and the capacity that

Exhibit 2 Jet fuel prices, air traffic, and GDP—a close relationship



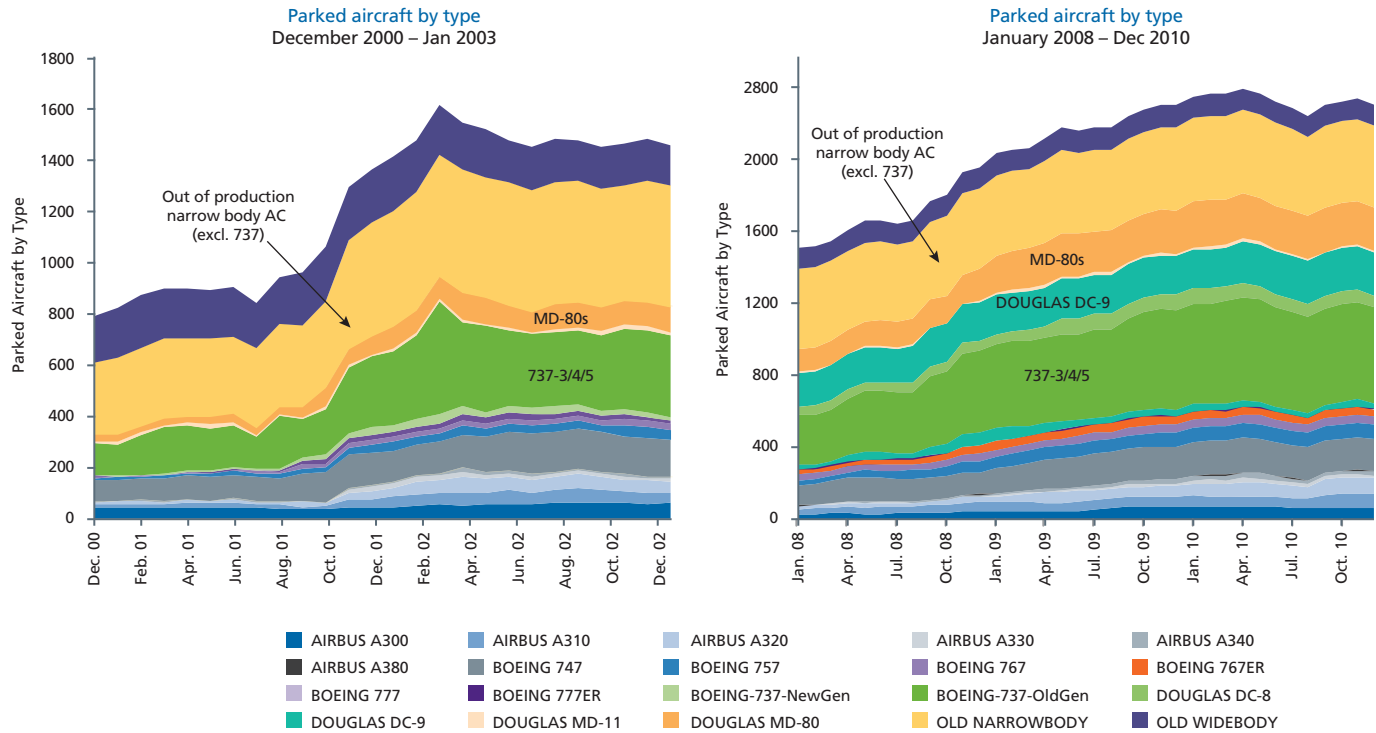
Source:

1 IATA International Traffic and Capacity Statistics; figure includes international scheduled passenger traffic.

2 IHS Global Insight Economic Outlook Index; Real GDP, six-month percentage change, annual rate. RPK change is vs. same month in prior year.

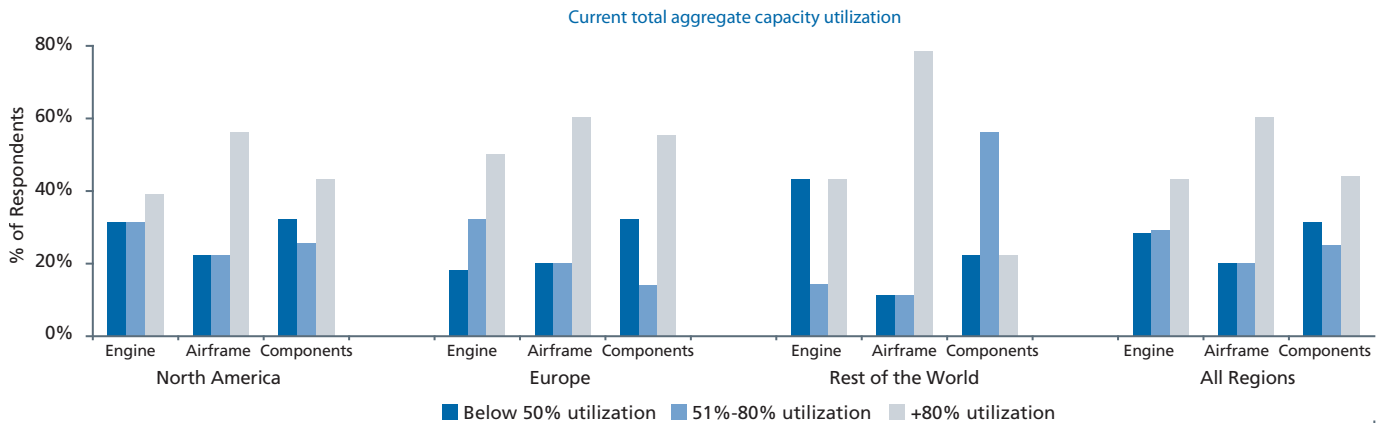
3 Oil prices tied to barrel of Brent crude.

Exhibit 3 Historical impact of economic cycle and fuel on parked aircraft



Source: ACAS Data (All aircraft, excluding RJs/TPs, with status of "Temporarily Inactive" or "In Storage"), OW analysis.

Exhibit 4 Global MRO capacity utilization



Source: Oliver Wyman analysis.

was taken out of the MRO industry in selected geographies/platforms during the downturn. Indeed, 47% of the respondents in our 2011 MRO Survey indicated total capacity utilization factors in excess of 80%.

From an MRO category perspective, survey results were strongest in airframe work, with 60% of respondents indicating hangar utilizations of 80% or more.

Overall, the greatest slack capacity exists in component repair, where capacity is generally significantly more scalable.

From a regional perspective, the highest utilization is being experienced within airframe maintenance in emerging lower-cost geographies. Significant pricing differences across the globe

have driven many airlines to seek out lower-cost airframe options, and MROs' ability to build capacity to meet demand in these geographies has not kept pace. Even 55% of European respondents suggest their facilities had returned to peak utilization. While this is partially demand driven, it is also a direct result of a significant rationalization in European capacity, seen as necessary for several years, but hastened in the last downturn. Due to these facility closures, current capacity levels are now more constrained.

Regardless of the underlying rationale, the increase in capacity utilization across platforms and geographies is a welcome change for MROs, and another sign of general health returning to the industry.

Headcount Reductions Easing Up

The headcount reductions characterizing the last three years—spawned by maintenance base closures, decreases in business and employee workloads, carriers' cost-cutting, and relocation of facilities from high-cost to low-cost geographies—appear to be easing up. In our 2010 MRO Survey, well over 50% of all respondents reported decreases in their maintenance department headcount. In our survey for 2011, 22% of all respondents report the intention to decrease headcount, but 23% plan to augment their maintenance workforces (see Exhibit 5).

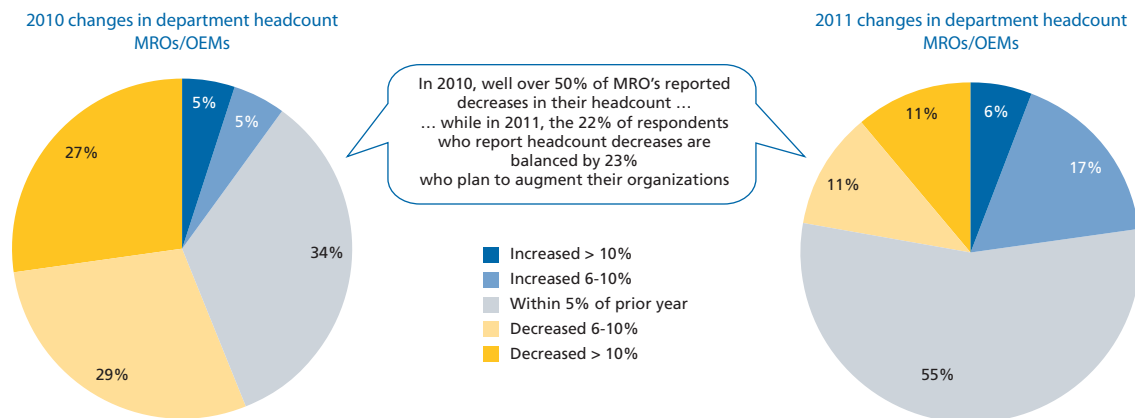
This year, our survey respondents were decidedly more upbeat about future plans. Thirty percent of the airline MRO community plans to increase their maintenance headcounts in 2011 (versus 8% planning to decrease). Independent MROs were more cautious, with 23% planning net headcount increases (versus 22% intending to decrease). This partially reflects our general opinion about the challenges facing independent MROs versus airline-affiliated/owned MROs or OEMs.

While the current trend should not be characterized as unbridled optimism, it does represent a more optimistic shift compared to 2010, when 56% of organizations planned headcount reductions. MRO survey respondents who experienced a decrease in employee headcount mentioned maintenance base closures as a reason for the decrease. But more normal course of business responses, such as the need to address wage pressures, were cited with a higher frequency.

From Survival Strategies to Growth Strategies

Growth is back on the MRO executive agenda—even if cautiously. MRO organizations have shifted focus from how to survive in a contracted economy to how to fuel growth in a recovering economy. The executives who participated in our 2011 survey are considering a range of growth strategies; however, three organic growth strategies appear to be dominant:

Exhibit 5 Maintenance organization headcounts: 2010 versus 2011



Source: Oliver Wyman analysis.

■ **Performance improvement:** Eighty-two percent of our 2011 survey respondents say they are likely to make significant investments in internal performance improvement. This performance improvement is being targeted at areas that allow MROs to consistently deliver superior turn around time, increase reliability (for example, mean time between removal), and boost productivity to offer lower costs to their customers. While certainly not new topics, the focus on internal investment in performance enhancement away from cost cutting is a sign that MROs are more confident about the future.

■ **Capability expansion:** Seventy-eight percent of respondents cited expansion of their service-offering portfolio, whether it be into new aircraft platforms or value-added services (for instance, maintenance program support and engineering support), as a primary growth strategy. With several new aircraft platforms coming online over the next one to four years, many MROs we have spoken with are also in the beginning to final stages of establishing their market-entry strategies for these new platforms. The overall expansion of the service portfolio is consistent with our general belief that the “one-stop-shop/mega-MRO” has become an increasingly dominant model in the aftermarket.

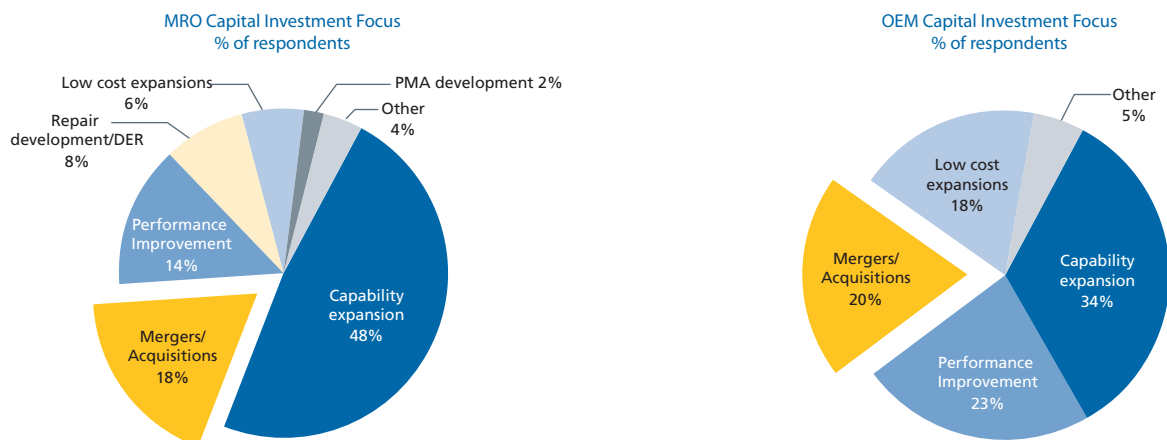
■ **Deeper repair development:** Fifty-nine percent of our survey participants will likely adopt this strategy in the current year. MROs cite the need to further vertically integrate their businesses, and repair

valuable, higher-margin work that they are outsourcing to subcontractors. Additionally, with increased price pressure from carriers, enhanced repair development (“fix it, and don’t buy a new one”) has become an increasingly popular way for MROs to differentiate themselves in the aftermarket. This approach significantly drives down costs for carriers, as repair costs are 20%-70% lower than costs associated with buying a new part.

Outside a range of organic growth strategies, mergers and acquisitions (M&A)—which saw little use in the past three years—are back on MRO executives’ radar screens. A surprising 49% of executives suggested that they are considering a wide range of M&A activities to expand their geographic presence, acquire new capabilities (platform or value-added services), migrate into complementary industries, acquire technology, or build scale. Indeed, M&A is the second most highly cited target of capital deployment for MROs in this year’s survey, and third most cited for OEMs (see Exhibit 6)—with about 20% of total respondents identifying it as a primary area of capital deployment.

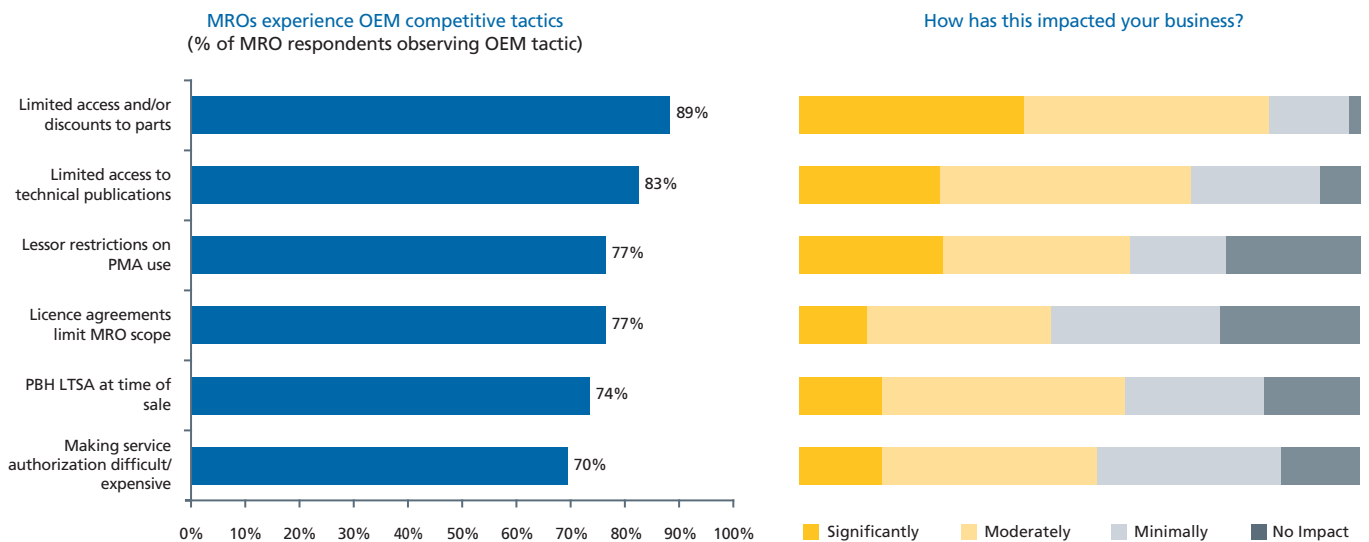
Why the renewed interest in mergers and acquisitions? We maintain that it stems from MROs’ desire to accelerate execution of their growth plans and to regain some of the momentum they lost while coming out of the global downturn. The improvement in the availability of capital and attractive valuations for buyers are also contributing factors.

Exhibit 6 MRO capital investment plans



Source: Oliver Wyman analysis.

Exhibit 7 OEM competitive tactics



Source: Oliver Wyman analysis.

OEMs Continue to Gain Share

Over the past five to ten years, commercial aviation OEMs (predominantly engine and component manufacturers) have successfully pursued several tactics to strengthen their position in the aftermarket. These activities have fallen into three broad categories. First, OEMs are effectively limiting the ability for MROs to conduct repairs by better guarding their intellectual capital. Examples of this tactic include the limited access to parts and also to technical publications. Second, OEMs are skillfully decreasing the ability for non-OEM material solutions to compete, through a variety of means, including influencing lessors into restrictive covenants inhibiting PMA use. Also included in this category is the use of license agreements with MROs which effectively inhibit the use of PMA parts and/or non-OEM approved repairs. Finally, OEMs are executing effective commercial strategies and locking in airlines with longer-term agreements that offer total-care service and guarantee maintenance costs over an extended period. These long-term agreements are increasingly being entered into at the time of aircraft purchase effectively locking out other MROs. Exhibit 7 outlines the leading tactics employed by OEMs in each of these categories as experienced by MRO respondents, as well as MROs perceived effectiveness of each tactic in gaining market control.

Given OEMs' growing strength, many MROs are adopting an "if you can't beat 'em, join 'em" strategy, particularly in the component and engine aftermarket. That is, they are more closely aligning themselves with OEMs as a means of not only growing revenues but also ensuring their future place in the aftermarket. For carriers, we think this will ultimately result in fewer truly competitive options in the aftermarket.

Conclusion

Respectable growth forecasted for 2010-2014. Signs of returning stability in the industry. Fresh interest in growth strategies rather than mere survival. Given all of these market signals, it's not surprising or unreasonable that many MRO executives are feeling more optimistic about 2011 than they did about 2010. But as always in a vast and fast-changing industry, there are a few challenges mixed in with the encouraging news. In this industry's case, the challenges consist of uncertainty about how volatility in fuel prices will affect air traffic. Depending on how the macroeconomic environment unfolds things could change drastically—and in undesirable ways—for MROs. A mindset of cautious optimism seems prudent, until executives gain a sharper sense of which way the winds will be blowing in the coming year. ❖

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The Aviation, Aerospace & Defense Practice

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