Overview of CFM Risk Transfer Agreements

Below is an overview of the type of overhaul and material agreements CFM International offers to its customers that contain some form of risk transfer to CFM. These agreements effectively shift all or part of the risk of the overhaul event cost to CFM and allows CFM to spread the risk of cost variations over a number of overhaul events. Since customers pay for the maintenance services on the basis of the number of hours of operation or a defined work scope, they have no incentive to negotiate with other providers or seek third party services or materials for the engines concerned that are already contracted with CFM.

TYPE OF AGREEMENT	DESCRIPTION
Rate Per Flight Hour (RPFH)	Under an RPFH agreement, engine maintenance is provided for a contractually predetermined rate (i.e. dollar amount per "flying hour" or per "flight cycle") and predetermined number of engines and number of years. Thus, CFM is responsible not only for the cost of the single overhaul, but also for the number of overhauls in the term of the agreement and takes the risk of unexpected early and high-cost overhauls. The burden and the risk are on CFM to forecast the number and cost of each shop visit based on its experience and knowledge of the engine and its own materials. This type of agreements may also include different optional services that transfer additional risk to CFM on a rate per flight hour/flight cycle basis, such as "on-site support", "flight line LRU coverage", "Lease engine coverage" and "LLP replacement". In addition, risk-transfer RPFH agreements are also proposed to lessors (i.e. "Portable Maintenance for Leasing" agreements) and associated with agreements proposed to their lessees (i.e. PML Activation Agreements).

	RPFHs are very common in the aviation industry for several decades. While shifting the risk of the number and cost of maintenance events on the service provider, they allow the airline to forecast engine maintenance costs with great accuracy. They also allow the airline to align maintenance cost expenditure with revenue generation events (i.e. hours of commercial operation).
Firm Fixed Price Time & Material (FFP T&M)	Under an FFP T&M agreement, the parties agree on pricing elements of the contract and workscope up front, including a precise cost for the overhaul, including material and labour. Thus, CFM takes the risk that the cost of material and labour could be higher than the agreed-upon price (i.e., CFM forecasts the likely parts scrap rate and/or repair content across a number of overhauls). Any workscope changes or expansion of the initially agreed upon workscope during an overhaul performed under an FFP agreement is subject to supplemental charges that are mutually agreed. The price of an FFP indicates the fixed price offered. An FFP T&M may be preferred by operators who believe that time between overhauls (i.e., time on wing) will improve over the life of the engine and, thus, prefer not to transfer the time on wing risk and the expected upside benefit of fewer overhauls. Customers may also opt for this type of contract, if they have a relatively short ownership horizon for the fleet, or if they are comfortable with the time on wing demonstrated by data or their experience based on the maturity of the engine model. In addition, risk-transfer FFP T&M agreements are also proposed to lessors for LEAP engines (i.e. "LEAP Lessor Maintenance Agreements").

FFP+ T&M	An FFP+ T&M is a variation on the FFP T&M agreement whereby CFM agrees to also take the risk and bear the cost of any later expansion of the work scope during overhaul.
Not To Exceed Time & Material (NTE T&M)	An NTE T&M agreement is a risk transfer contract that shifts the risk of a higher than anticipated overhaul costs to CFM. Under this form of agreement, the customer negotiates a maximum price it will pay for the overhaul. Unlike the FFP, however, in an NTE contract, if the cost of a particular overhaul is less than the NTE price, the customer only pays the lesser amount. The price offered for an NTE contract indicates the maximum possible invoice amount. The reason a customer may opt for this type of agreement is similar to the FFP T&M (see above).
Fixed Price Labor Schedule Time & Material (FPLS T&M)	FPLS T&M contracts involve an agreement on labor cost, with material and repair purchased at catalogue prices, subject to additions caused by the expansion of the workscope during overhaul to be agreed with the customer.
Set Management Services (SMS)[1]	SMS agreements are event-based material cost guarantees. Under these agreements, CFM essentially guarantees that, for an agreed upon set of parts (e.g., certain stages of airfoils[2]), only a limited number of parts will have to be replaced when the engine comes in for overhaul – and the rest of the parts in that "set" will be repaired. SMS agreements may cover a single stage of airfoils (e.g., HPT blades) or the entire flow path in engine. The scope of coverage and the amount of risk transferred varies and is mutually agreed. This

[1] SMS agreements are sometimes also referred to as Maintenance Cost Per Set agreements (MCPS).

[2] CFM's "Flex Nozzle" is a SMS agreement that covers high pressure turbines nozzles or low-pressure turbines nozzles.

	type of agreement enables operators with overhaul capabilities and independent overhaul shops to perform overhauls and still shift all or part of the material cost risk to CFM. This arrangement gives the overhaul provider certainty on the cost of the covered sets of parts because CFM takes the scrap rate risk.