

Annex A: Incumbent supplier and market dynamics analysis

Accommodation of new suppliers into existing (global) markets which are already well supplied and competitive, and in which demand is no longer growing, will likely have an impact on the commercial outcome (and hence behaviour) of the incumbent suppliers. As a general rule, when commercial volumes of a supplier decline, unit COGS will tend to go up, and required pricing also. In some hitherto “stable” markets (e.g., PCV, Rota), we have an indication from incumbent suppliers of the yearly volume below which they would reconsider their participation in the market. In other markets, we have an idea of the price increases to be expected as volumes decrease, thanks to some historical tender bidding behaviour where price-volume ladders were submitted. As these source data are sensitive, scenarios driven by them will not be shared, but the Market Shaping team and UNICEF-SD have relative confidence in predicting how any given market would likely play out given such insights. Another scenario is where an incumbent manufacturer simply raises prices after observing that Gavi is willing to pay more to others, even if their existing price is still profitable.

The markets where undesirable incumbent behaviour can more likely be avoided are the ones which are currently undersupplied or predicted to be heading for undersupply due to imminent demand expansion or potential supplier exit (e.g. OCV, Malaria, multivalent Ebola). Markets where new suppliers are sought out for the purpose of stimulating more competition should have the opposite effect on incumbents (e.g. MR, or any market where new supplier has a profile advantage).

An example of a market where product profiles are relatively generic, competition is intense, and prices have no further room for reduction, is Pentavalent. The healthy market equilibrium for Gavi supply turns out to be ~4 suppliers globally (optimising across production economics & price of each supplier and overall supply security and buffer). Given that we have historical price-volume ladder and other bidding data, some scenarios have been generated, driven by varying levels of volume shift to a new supplier. In examples such as IPV, not only would exits be inevitable, but we are already in a situation where new aspiring entrants never managed to secure a Long-Term Agreement (LTA) with UNICEF in the first place, such is the oversupply already (even before a notional African IPV comes to the table). HPV is another market that is predicted to be in overcapacity by the time a viable African HPV source could materialize.

This is not to say, however, that incumbent suppliers cannot strategise to maintain some economic interest in a market in anticipation of their own-branded product facing reduced demand. In the near term, new African suppliers will not, by and large, “invent” vaccines for existing categories but seek to in-license and tech-transfer appropriate assets from incumbent manufacturers (who will receive royalties in most cases)¹. In this way, volumes of procured finished goods can shift between geographic source but exiting incumbents could consider partially compensating for this if they move fast to

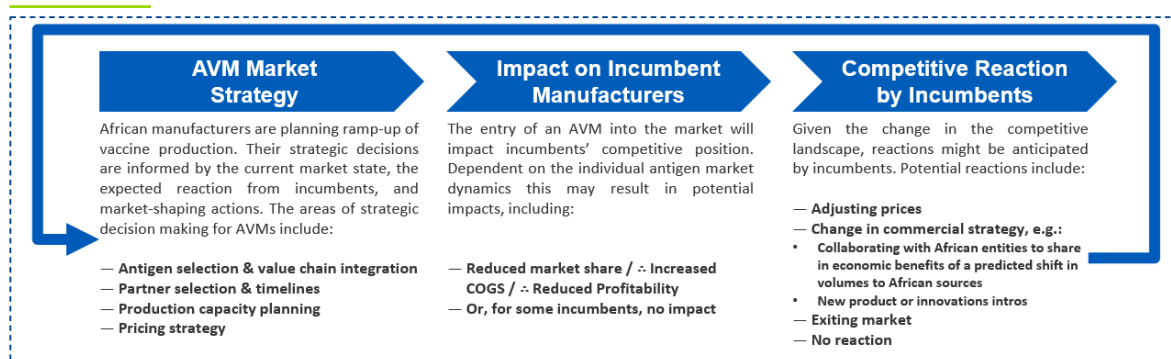
¹ In the medium-long term, of course, African R&D will start delivering innovations across improved product profiles and unaddressed diseases

enable an African partner company, benefitting from bulk supply (for fill-finish arrangements) initially and royalty streams when the full process is localized. In this way, a market “exit” is only so in the sense that the incumbent gives up volume of its own branded product but compensates through some economic interest in the product that replaces it.

IFPMA/DCVMN have been consulted in detail, and this logic is borne out. Among DCVMN members there is an understandable split over where this may be headed, with incumbent suppliers cautious of what is at stake for them, and newer African members claiming eventual entitlement of commercial volume (especially to African countries) that incumbent DCVMs have hitherto enjoyed. Both trade associations caution that extensive modelling or game theory is of limited value for any given market. There is acceptance across the industry that a level of re/de-localization of supply is inevitable with the strong underlying politics, and that the affected markets would play out in ways that are only partly predictable, given the dimension of potential African partnerships with existing suppliers.

A qualitative modelling of incumbent responses is given below for some market archetypes, with quantitative scenarios for the Penta example also:

Approach: The knock-on effects of African vaccine manufacturers entering the market were assessed for their impact on sustainable competition



Understanding these iterative steps of competitive reaction enables an assessment of how a new AVM impacts sustainable competition in antigen markets

	Scale-up of African Vaccine Manufacturers	Impact on Incumbent Manufacturers	Competitive Reaction by Incumbent Manufacturers	Overall impact to sustainable competition in the market
Needing enhanced product profiles B	<ul style="list-style-type: none"> • Outside chance that AVM is able to access HPV-9 DS asset (e.g., from Merck) with go-to-market in 2026 • No COGS available – likely to be higher than alternatives 	<ul style="list-style-type: none"> • Market shortages of HPV-9 expected to continue to 2026 – AVM to fill excess demand 	<ul style="list-style-type: none"> • No reaction from incumbent manufacturers anticipated 	<ul style="list-style-type: none"> • Improvement in Supplier diversification • Increase of WAP expected
	Illustrative Example – HPV-9 <ul style="list-style-type: none"> • More likely that AVM can access DP HPV-9 asset (e.g. from Chinese mfct) with go-to-market earliest in 2030 • No COGS available – likely higher than DCVM entrants 	<ul style="list-style-type: none"> • By 2030, other DCVM market entrants likely to have addressed supply shortages • New AVM to fragment market, increase excess supply, and drive an increase in incumbent COGS 	<ul style="list-style-type: none"> • Excessive HPV-9 by 2030 supply and market fragmentation may lead to price increases, and some incumbent supplier exits 	<ul style="list-style-type: none"> • No supplier diversification advantage given the potential for incumbent market exits • Increase of WAP expected
New supplier wouldn't improve market health C	<ul style="list-style-type: none"> • AVM can likely access DS TT with go-to- market earliest in 2027 • No COGS data available – likely significantly higher than DCVM incumbents (modelled as 75% higher) 	<ul style="list-style-type: none"> • Decreased volume for incumbents likely to negatively impact incumbent COGS 	<ul style="list-style-type: none"> • The addition of an AVM Penta increases risk to incumbent supplier business sustainability • Revealed scope for higher prices from AVM supplier would likely lead to price increases from incumbents 	<ul style="list-style-type: none"> • No supplier diversification advantage given the potential for incumbent market exits • Scenario analysis completed based on historic tender pricing shows increases in program cost of \$30 - \$70 Mn per annum³.

3 Note 1. Scenario analysis completed for Penta based on UNICEF tender pricing. Key assumptions that AVM awarded 10% of the market (constant: in-line with existing tender allocations and current African capacity) at a price 75% higher than WAP (constant: n-line with price differentials from COGS for established manufacturing), with reactive price increase from incumbents (variable from 5% to 40%), and incumbent supplier exiting the market (various supplier modelled).

Legend: