Technical Annex

Operationalizing the BBAMC
Calculating Ability to Pay

From arbitrary price-setting to a realistic value-based price grounded in country budgets

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Using HTA to Define the Commitment: Potential Entry Points

- Inform the terms of contracts by defining the HTA model structure and assumptions,* and generating price and volume and price per unit of health gain
- Confirm/refine value and reward
- Verify health and cost impact

*Model assumptions which might change from pre-launch to at-launch HTA are:
(i) Technical (related to new vaccine efficacy): the extent to which the new vaccine meets the TPP elements;
(ii) Environmental: technology comparator/s (the standard of care) and its price (particularly if effective therapies are discovered and introduced); the way COVID-19 is managed in a specific country; COVID-19 incidence.
A “Commitment Pool” Tied to Product Efficacy

• One or more countries would need to take a leadership role as “first movers”—for example, UK, Norway, Thailand, India and South Africa. Ex-ante HTA for those countries would give several important pieces of information:

  • The total value-based market: HTA would provide an upper bound for value-based commitments.
  • Relative value by country: HTA would show how the total value proposition of a vaccine varies across countries.
  • Relative value by product profile: HTA would show how the total value proposition of a vaccine varies vis-à-vis specific product characteristics.
Indicative Schematic for Defining and Dividing a Value-Based Commitment

Commitment pools are for revenue with set volume, variable price based on efficacy.

Min commitment pool still allows originator to realize return.

Country-specific commitment “shares” would be derived from relative value, calculated by HTA.

Total commitment pool increases to reward better product efficacy.

Max total commitment pool still allows countries to capture portion of economic surplus.

**Note:** Indicative Values Only
Multiple Entrant Competition

- Any vaccine meeting minimum TPP can qualify to compete for a portion of the BBAMC commitment
- Pre-agreed value-based price is maximum that company can charge
- Companies can voluntarily lower prices below maximum allowed level to compete for larger share of the market
- Countries must fulfill overall revenue commitment but can choose between qualifying vaccines

Note: Indicative Values Only
Underwriting National Purchase Commitments: A Simplified Strawman

Other potential underwriters could include government bonds, social impact bonds, or national bank reserves.

**Country Government**

**Multilateral Development Bank**

**Before the vaccine comes to market**

The country signs an ex ante agreement with a multilateral development bank to guarantee the commitment.

The country commits to purchase 1,000 vaccines at $10 each, for a total of $10,000.

The MDB guarantees the country's $10,000 commitment.

**Once the vaccine comes to market**

Per the terms of the agreement, the country's commitment converts to a $10,000 liability on the MDB's ledger. The clock starts ticking on a 3-year window to launch the vaccine and make good on the commitment.

The country purchases 900 vaccines at $10 each, for a total of $9,000.

The MDB takes on a $10,000 conditional liability for the country.

**After the end of a three-year window**

The remaining balance of the country's commitment converts to sovereign debt to the MDB, subject to pre-agreed repayment terms. The capital (to be repaid by the country) is used to purchase the remaining vaccines for the country. If the country no longer needs the vaccines, they are donated to another country.

The country has an unfulfilled commitment of 100 vaccines at $10 each, for a total of $1,000.

The MDB pays the remaining $1,000 to purchase the vaccines. The country owes the MDB $1,000 in sovereign debt.
Underwriting National Purchase Commitments:
Additional Steps with Local Licensing

Other potential underwriters could include government bonds, social impact bonds, or national bank reserves.

Country Government

Before the vaccine comes to market
The country commits to purchase 1,000 vaccines at $10 each, for a total of $10,000.

Once the vaccine comes to market
Originator licenses generic company to manufacture the vaccine. Manufacturer charges government-agreed price and keeps cost+; remainder of revenues paid to originator as royalties.

The country purchases 900 vaccines at $10 each from a licensed generic manufacturer, for a total of $9,000.

After the end of the three-year window
The country has an unfulfilled commitment of 100 vaccines at $10 each, for a total of $1,000.

Multilateral Development Bank

The MDB guarantees the country's $10,000 commitment.

The MDB takes on a $10,000 conditional liability for the country.

Generic manufacturer:
Keeps cost+ (e.g. $2 per vaccine)

Originator:
Receives remainder of revenue as royalties (e.g. $8 per vaccine)

The MDB pays the remaining $1,000 to purchase the vaccines. The country owes the MDB $1,000 in sovereign...
Benefit Based Price and Volume: Axes of Uncertainty

**Economic**
- Global or National Recession: Lower Price, Lower Volumes
- GDP per Capita Growth or Contraction
- High GDP per Capita Growth: Higher Price, Higher Volumes
- Austerity/Investments in Health Decline: Lower Price, Lower Volumes
- Ability to Pay

**Epidemiological**
- Contracting Disease Burden, Successful Suppression, Herd Immunity: Lower Price, Lower Volumes
- Disease Burden Trajectory
- Expanding Disease Burden, No Herd Immunity, Second Peak: Higher Price, Higher Volumes

**Commercial**
- No Change: No Change in Price, Volume
- Comparator Landscape
- Introduction of Effective Treatment or TTI Tech; Price Reductions for Existing Products: Lower Price, Indeterminate Volume Effect
- No Change: No Change in Price, Volume
- Diagnostic Landscape
Mapping Essential and Supplementary Governance Functions for the BBAMC

**Supply Side**
- **Ex Ante:** Before Product Developed
  - **OPTIONAL:** Set parameters for supply-side participation and/or secure statements of intent from industry.

**Demand Side**
- **Ex Post:** After Product Developed
  - **CERTIFY:** Whether product meets minimum target product profile
  - Calculate and certify country commitments based on pre-agreed HTA process and parameters
  - Track country progress toward fulfilling commitments for enforcement via securitisation mechanism

**Ex Ante:** Before Product Developed
- **Aggregate and secure value-based demand across countries**
- **Set parameters of target product profile**
- **Set HTA process and parameters for determining price and volume commitments at time of launch, potentially to include minimum/maximum prices**
BBAMC Proposes a Moderate Level of Collaborative Purchasing

**Minimal Collaboration**
- Countries make political commitment to use predefined HTA process at launch to determine price and volume.
- Commitments are unsecured; reputational commitment only.
- HTA process implemented by country governments.
- No secretariat, or skeleton secretariat to track commitments only.

**BBAMC**
- Countries make coordinated, secured purchase commitments via a financial intermediary.
- Central coordination unit sets TPP (and minimum TPP), sets and enforces common approach to value assessment, tracks commitment fulfillment, and negotiates directly with R&D actors.
- HTA process to define price and volume commitments implemented by country governments with oversight by central coordination unit.
- Each country pays country-specific value-based price for vaccine.
- Each country manages own purchasing to draw down against commitment.

**Joint Purchasing**
- Countries make coordinated, secured purchase commitments; all countries pay the same price.
- All purchasing is done directly through a joint (centralised) purchasing unit; countries must make financial contributions to the central unit to cover their purchases.