



# FAMILY PLANNING MARKET REPORT

OCTOBER 2017

## ACKNOWLEDGEMENTS:

This report was produced as part of the landmark FP2020 Global Markets Visibility Project that CHAI launched in early 2014 in conjunction with the Reproductive Health Supplies Coalition (RHSC).

The shipment data provided by suppliers was pivotal to addressing information gaps and constructing a more comprehensive view of the reproductive health commodities market. We would like to thank current participating suppliers (Bayer, CR Zizhu, Cipla, Cupid, Mylan, Helm AG, Female Health Company, Merck/MSD, Pfizer, Pregna, PT Tungal, Shanghai Dahua, SMB and Techno Drugs) as well as our partner, the Concept Foundation, for their support in collecting and aggregating data from the Generic Manufacturers for Reproductive Health (the GEMS Caucus).

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*The 2017 Family Planning Market Report covers the total FP2020 public sector market— defined as volumes purchased by institutional buyers (USAID, UNFPA, SMOs, etc.) and Ministries of Health (MOHs) or government-affiliated procurers for the 69 FP2020 focus countries (defined as countries with a 2010 gross national income per capita less than or equal to US\$2,500). The report covers all product-based modern methods using historical supplier-reported shipment data collected from 14 suppliers<sup>1</sup> for female condoms, implants, injectables, IUDs, orals (combined and progestin only), and emergency contraceptives, and data from the Reproductive Health Interchange (for male condoms).*

## THE FP2020 PUBLIC SECTOR MARKET VALUE DECLINED SHARPLY FROM 2015 TO 2016, WHILST THE CYP<sup>2</sup> MIX<sup>3</sup> CONTINUED TO SHIFT TOWARDS LONG-ACTING REVERSIBLE CONTRACEPTIVES, OFFSETTING SOME OF THE DECLINE IN TOTAL CYPs SHIPPED.

From 2015 to 2016, there was a 28 percent decline<sup>4</sup>, US\$274 million to US\$196 million, in the value<sup>5</sup> of the public sector market in the 69 FP2020 focus countries. This substantial decrease in market value was primarily driven by a sharp decline in the shipments of injectables and orals (combined and progestin only), 49 percent and 34 percent decline respectively, to the 69 FP2020 countries. Consequently, the total couple years of protection (CYPs) shipped, an estimate of the duration of contraceptive protection provided through products shipped, fell from 123 million in 2015 to 104 million in 2016. This significant decrease of the total FP2020 public sector market value, as implied by supplier shipment data, aligns to the sizeable decline also observed in the donor-funded shipments tracked by the Reproductive Health Interchange (RHI).<sup>6</sup>

Though the value of the FP2020 public sector market remained relatively stable since 2011<sup>7</sup>, the sharp decrease from 2015 to 2016 offset the gains of prior years and caused a net annual decline in value of seven percent from 2011 to 2016. Despite this significant decline, the total CYPs shipped only decreased by one percent over the same period. This was mainly driven by the shift in CYP mix towards implants<sup>8</sup>, which accounted for 9 percent of all CYPs shipped in 2011 compared to 27 percent in 2016.

There are a number of possible reasons for the declined market value from 2015 to 2016. Though further investigation beyond the scope of this report would be required to affirm these reasons, they could include:

- The decline in donor spending may have led to a decline in total public sector procurement as other procurers<sup>9</sup> may not have fully covered the shortfall.
- Some shipments may have shifted to local and regional non donor-supported suppliers that are not captured in this report.
- Procurement patterns fluctuate and 2016 might be an outlier year in which procurers intentionally procured less and instead consumed more of their inventories.

Moving forward, the availability of funding for contraceptive commodities could significantly impact the family planning commodity market. A number of recent analyses, including RHSC's 2016 Global Contraceptive Commodity Gap Analysis, have identified significant funding gaps based on current and existing family planning spending levels.<sup>10</sup> In addition, there is continued uncertainty with regard to the future of the U.S. government's financial commitment to family planning. Should the funding challenges remain unaddressed, there could be a decline in the family planning commodity market and subsequently in the number of users on modern methods of contraception.

1. Participating suppliers represent >95% of volumes within each method of the Reproductive Health Interchange except for IUDs and male condoms.

2. Couple Years of Protection (CYP) is the estimated protection provided by contraceptive methods during a one-year period e.g. 120 condoms provide a couple protection for one year. See Appendix C for further details.

3. CYP mix refers to the percentage distribution of CYPs shipped by method.

4. Where percentage changes are discussed, the Compound Annual Growth Rate (CAGR) is used unless otherwise noted.

5. Market value and spend refers to the supplier-reported shipment volume multiplied by the average prices of UNFPA and USAID for the specific years.

6. Reproductive Health Interchange, available at <https://www.unfpaprocedurement.org/rhi-home>. See Appendix B for more details.

7. Except for a 2012 increase driven by higher implant shipment levels prior to the 50 percent reduction prices in 2013 as part of the Implant Access Program (IAP).

8. Since the price reductions, the implant unit cost remains higher relative to other methods, but lower on a cost per couple-years of protection (CYP) basis. See Exhibit 4 for further details.

9. Examples of other procurers include MOHs and SMOs.

10. RHSC Global Contraceptive Commodity Gap Analysis, available at [https://www.rhsupplies.org/uploads/tx\\_rhscpublications/Global\\_Contraceptive\\_Commodity\\_Gap\\_Analysis\\_2016.pdf](https://www.rhsupplies.org/uploads/tx_rhscpublications/Global_Contraceptive_Commodity_Gap_Analysis_2016.pdf)

## FROM 2015 TO 2016, THERE WAS A SUBSTANTIAL DECREASE IN THE MARKET VALUE OF THE FP2020 PUBLIC SECTOR MARKET, PRIMARILY DRIVEN BY A DECLINE IN THE SHIPMENTS OF INJECTABLES AND ORALS (COMBINED AND PROGESTIN ONLY). PRIOR TO 2016, THE VALUE OF THE FP2020 PUBLIC SECTOR MARKET REMAINED RELATIVELY STABLE. THE SHIFT IN CYP MIX TOWARDS IMPLANTS FROM 2011 TO 2016 HELPED OFFSET SOME OF THE DECLINE IN CYPS SHIPPED OVER THE SAME PERIOD.

*This section analyzes shipment, market value, and CYPs shipped trends in the total FP2020 public sector market from 2011 to 2016, with a focus on significant new findings from 2015 to 2016. Analyses are based on the supplier shipment data of the 14 participating suppliers (one additional supplier from the previous report) for all product-based methods except for male condoms, which are derived from the Reproductive Health Interchange (RHI) database.*

### **A 28 percent decline in market value from 2015 to 2016 led to an overall annual decline of 7 percent from 2011 to 2016.**

The total FP2020 public sector market value declined from US\$277 million in 2011 to US\$196 million in 2016; from 2011 to 2015 the market value remained relatively stable, with the exception of an increase in 2012 driven by increased implant shipments prior to the 2013 reduced price.

From 2011 to 2016, the market value of long-acting reversible contraceptives (LARCs)<sup>11</sup> increased by 6 percent annually, propelled by an annual increase of 24 percent in implant shipments during this period<sup>12</sup>. Conversely, the market value of all short-acting methods<sup>13</sup> decreased by 12 percent annually over this period, including a 21 percent annual decrease among orals (combined and progestin only) products, offsetting the overall market value.<sup>14</sup>

The largest decline in the overall market value in a single year was recorded from 2015 to 2016, with a decrease of US\$78 million, from US\$274 million to US\$196 million. This was due to a decline in shipments across all methods (with the exception of IUDs), and most notably a sharp decline among injectables<sup>15</sup>. (Exhibits 1 & 2).

### **The total number of CYPs shipped decreased from 110 million in 2011 to 104 million in 2016, at an annual rate of 1 percent for the period. This decrease in CYPs is lower than the 7 percent annual decline of the market value for the period due to the continued shift towards long-acting implants.**

From 2011 to 2016, the annual decrease of 12 percent derived from short-acting method CYPs shipped – particularly orals (combined and progestin only) – is the main cause for the overall decline in the number of CYPs shipped from product-based modern methods of

contraception. Specifically, from 2015 to 2016, the decline related to injectables and orals (combined and progestin only) is most notable, with 48 percent and 34 percent decreases in CYPs shipped respectively. By contrast, CYPs shipped from long-acting implants and IUDs increased by 6 percent annually from 2011 to 2016, and remained relatively stable from 2015 to 2016, decreasing by 1 percent.

### **Although contraceptive implant shipments declined slightly by 10 percent from 2015 to 2016, LARCs continued to increase as a proportion of the market value and dominated in the CYP mix.**

After a period of continued growth from three million units in 2011 to 10 million units in 2015, annual implant shipments decreased by 10 percent to 9 million units in 2016. Short-acting methods, which saw steady shipment declines year over year, experienced the largest decline observed at 30 percent from 2015 to 2016. As a result, the 2016 proportion of market share and CYP mix represented by LARCs increased relative to 2015, with LARCs making up 42 percent of the total FP2020 public sector market value and 73 percent of the CYP mix in 2016. (Exhibits 1-3, 5)

### **In 2016, 10 countries represented just over half of the total FP2020 public sector market value.**

The market for contraceptives is fairly concentrated with 10 high volume countries (Ethiopia, Tanzania, Zimbabwe, Nigeria, Kenya, Bangladesh, the Democratic Republic of Congo, Ghana, Uganda, and Burkina Faso) accounting for US\$101 million, or 52 percent of the total FP2020 public sector market value in 2016<sup>16</sup>. This trend, which includes five core countries<sup>17</sup>, has remained relatively stable over the past four years. (Exhibits 6, 7, 8)

11. Long-acting and reversible contraceptive methods include IUDs and implants.

12. From 2011 to 2016, the implant market value saw an annual increase of only 6 percent compared to the annual increase of 24 percent in shipment quantities because of the implant price reductions in 2013 allowing more implants to be purchased with the same amount of funding.

13. Short-acting methods include male and female condoms, injectables, orals (combined & progestin only) and emergency contraceptives.

14. The prices for orals (combined and progestin only) have remained relatively stable from 2011 to 2016, indicating the decrease is driven by volume.

15. The prices for injectables have remained relatively stable from 2015 to 2016 indicating the decrease is being driven by volume.

16. Pakistan, Malawi and Madagascar were part of the top 11 countries which accounted for

over 50 percent of the 2015 FP2020 public sector market value in 2015, but they are no longer on this list. CHAI has identified through consultations with stakeholders that donor funding for Pakistan has shifted away from commodity procurement. Further research is needed to determine if other sectors in Pakistan are covering the shortfall resulting from the decline in donor-funded shipments, as in the case of Bangladesh, India, and Indonesia, which is further described on page 13.

17. (in alphabetical order) Bangladesh, Ethiopia, Nigeria, Uganda and Zimbabwe have consistently appeared in the top 10 markets from 2013 to 2016.

EXHIBIT 1: TOTAL FP2020 MARKET SIZE (USD)

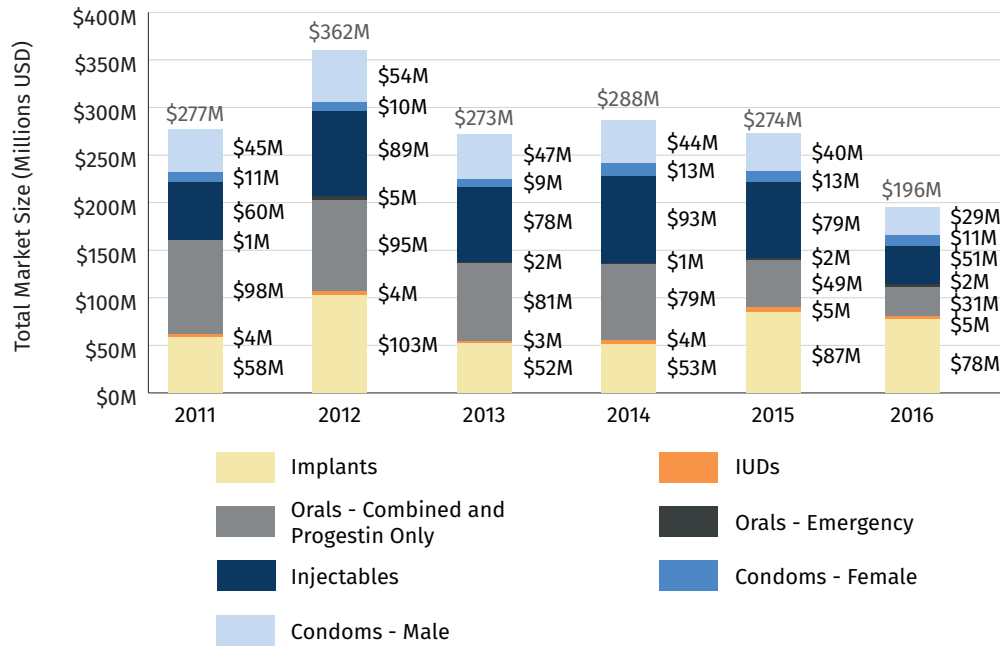
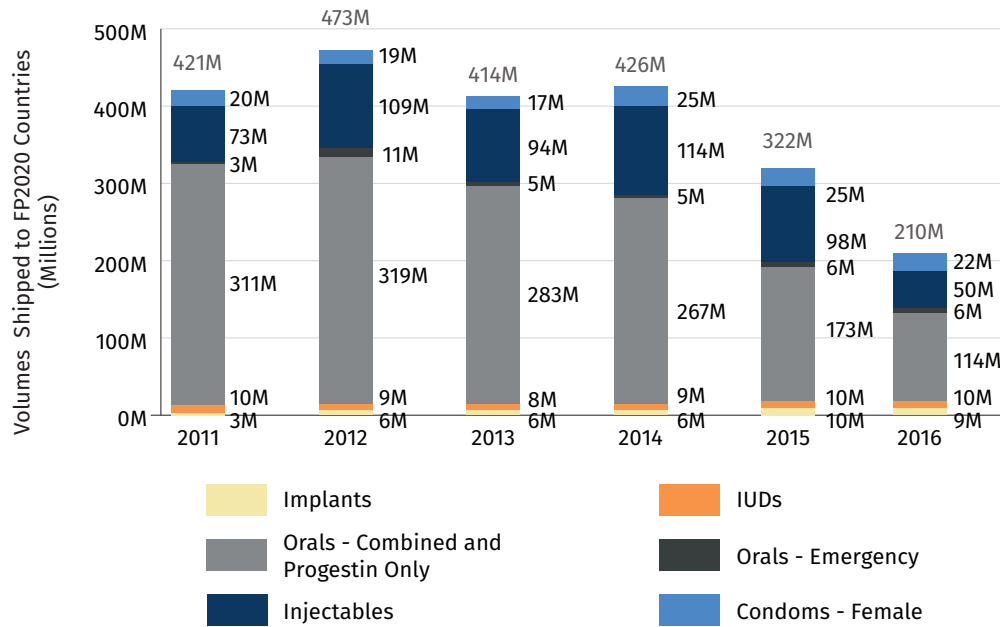


EXHIBIT 2: TOTAL FP2020 MARKET VOLUMES (MALE CONDOMS EXCLUDED)\*



\*Male condoms are shown separately because the source of the shipment data is from RHI whereas all other methods are supplier-reported. See Appendix C for further details.

| MALE CONDOM SHIPMENT VOLUMES (BILLIONS) |      |      |      |      |      |
|-----------------------------------------|------|------|------|------|------|
| 2011                                    | 2012 | 2013 | 2014 | 2015 | 2016 |
| 1.62                                    | 1.84 | 1.57 | 1.49 | 1.36 | 0.97 |

Note: The sum of individual stacked bars for all exhibits may differ slightly from totals due to rounding

EXHIBIT 3: TOTAL FP2020 CYPs SHIPPED

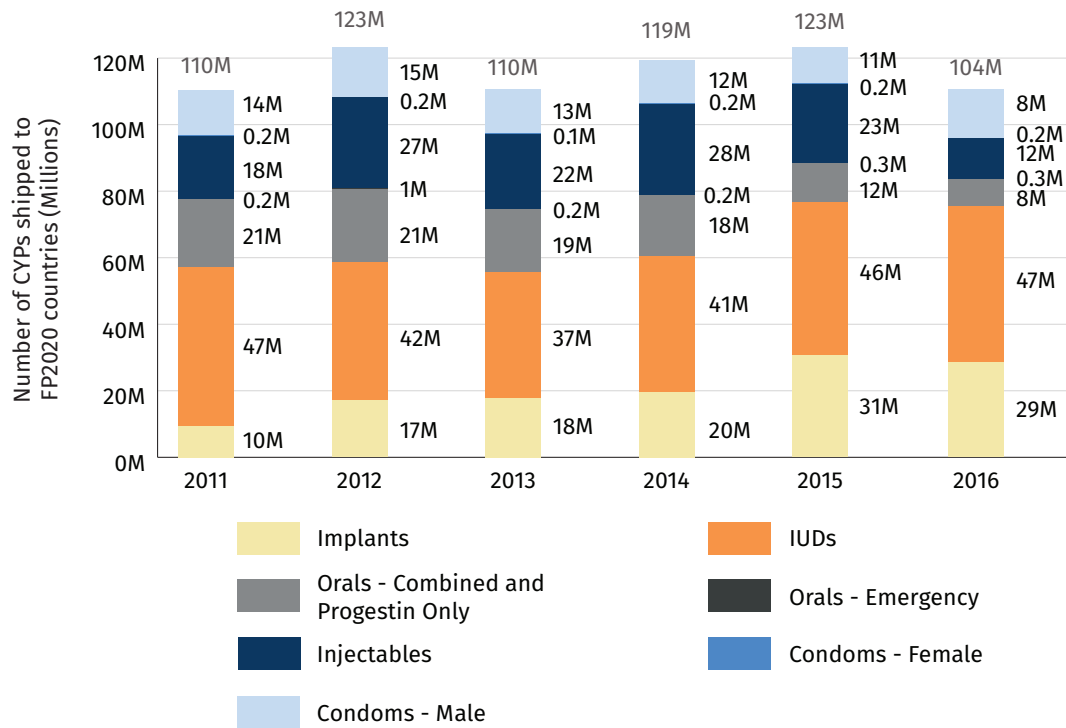
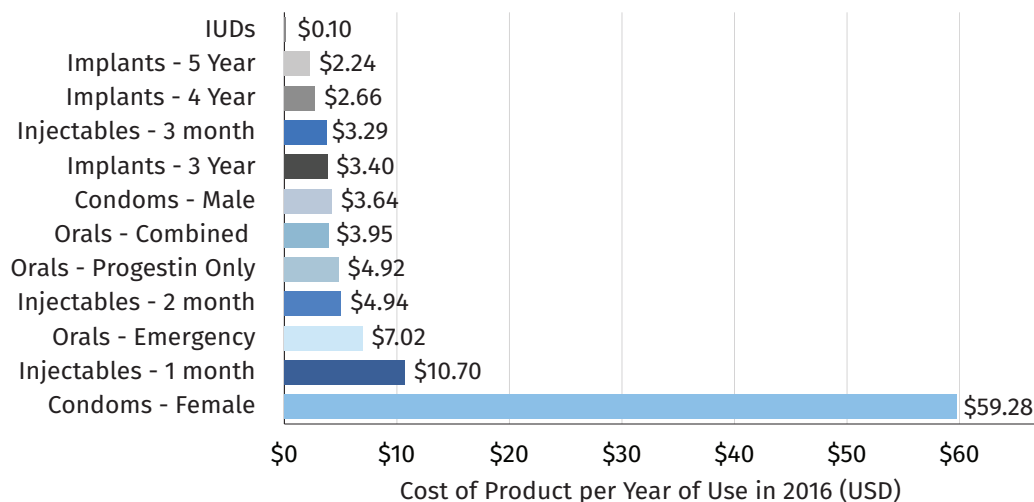


EXHIBIT 4: COST PER CYP BY METHOD (USD)

| METHOD                 | UNITS PER CYP | UNIT COST |         |        |        |        |        | COST PER CYP |         |         |         |         |         |
|------------------------|---------------|-----------|---------|--------|--------|--------|--------|--------------|---------|---------|---------|---------|---------|
|                        |               | 2011      | 2012    | 2013   | 2014   | 2015   | 2016   | 2011         | 2012    | 2013    | 2014    | 2015    | 2016    |
| Condoms - Female       | 120.00        | \$0.56    | \$0.55  | \$0.54 | \$0.53 | \$0.52 | \$0.49 | \$67.02      | \$66.42 | \$65.04 | \$63.36 | \$62.40 | \$59.28 |
| Condoms - Male         | 120.00        | \$0.03    | \$0.03  | \$0.03 | \$0.03 | \$0.03 | \$0.03 | \$3.34       | \$3.52  | \$3.56  | \$3.57  | \$3.51  | \$3.64  |
| Injectables - 1 month  | 13.00         | \$0.82    | \$0.82  | \$0.83 | \$0.81 | \$0.81 | \$0.82 | \$10.61      | \$10.64 | \$10.82 | \$10.58 | \$10.47 | \$10.70 |
| Injectables - 2 month  | 6.00          | \$0.82    | \$0.82  | \$0.83 | \$0.81 | \$0.81 | \$0.82 | \$4.90       | \$4.91  | \$5.00  | \$4.88  | \$4.83  | \$4.94  |
| Injectables - 3 month  | 4.00          | \$0.82    | \$0.82  | \$0.83 | \$0.81 | \$0.81 | \$0.82 | \$3.27       | \$3.27  | \$3.33  | \$3.26  | \$3.22  | \$3.29  |
| Orals - Combined       | 15.00         | \$0.31    | \$0.30  | \$0.28 | \$0.30 | \$0.28 | \$0.26 | \$4.70       | \$4.44  | \$4.26  | \$4.43  | \$4.20  | \$3.95  |
| Orals - Progestin Only | 15.00         | \$0.32    | \$0.32  | \$0.31 | \$0.31 | \$0.32 | \$0.33 | \$4.84       | \$4.85  | \$4.64  | \$4.60  | \$4.80  | \$4.92  |
| Orals - Emergency      | 20.00         | \$0.34    | \$0.49  | \$0.44 | \$0.30 | \$0.37 | \$0.35 | \$6.74       | \$9.74  | \$8.84  | \$5.92  | \$7.40  | \$7.02  |
| Implants - 3 Year      | 0.40          | \$18.65   | \$17.98 | \$8.50 | \$8.50 | \$8.50 | \$8.50 | \$7.46       | \$7.19  | \$3.40  | \$3.40  | \$3.40  | \$3.40  |
| Implants - 4 Year      | 0.31          | \$18.65   | \$17.98 | \$8.50 | \$8.50 | \$8.50 | \$8.50 | \$5.83       | \$5.62  | \$2.66  | \$2.66  | \$2.66  | \$2.66  |
| Implants - 5 Year      | 0.26          | \$18.65   | \$17.98 | \$8.50 | \$8.50 | \$8.50 | \$8.50 | \$4.91       | \$4.73  | \$2.24  | \$2.24  | \$2.24  | \$2.24  |
| IUDs                   | 0.22          | \$0.43    | \$0.43  | \$0.43 | \$0.48 | \$0.47 | \$0.46 | \$0.09       | \$0.09  | \$0.09  | \$0.10  | \$0.10  | \$0.10  |

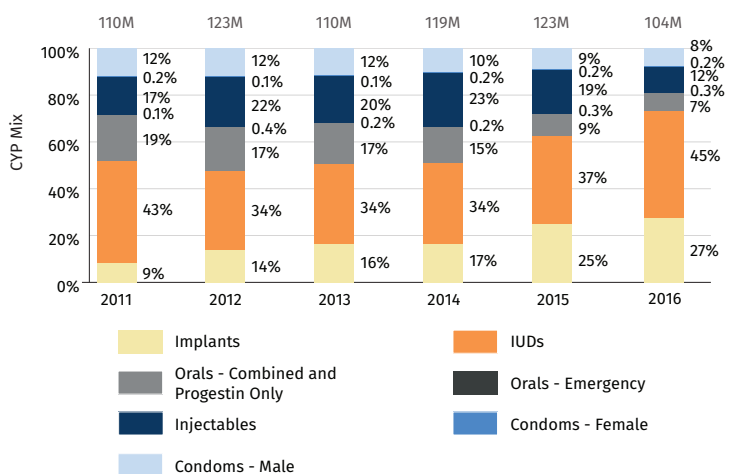
Note: The sum of individual stacked bars for all exhibits may differ slightly from totals due to rounding

## EXHIBIT 4: COST PER CYP BY METHOD (USD) (CONTINUED)

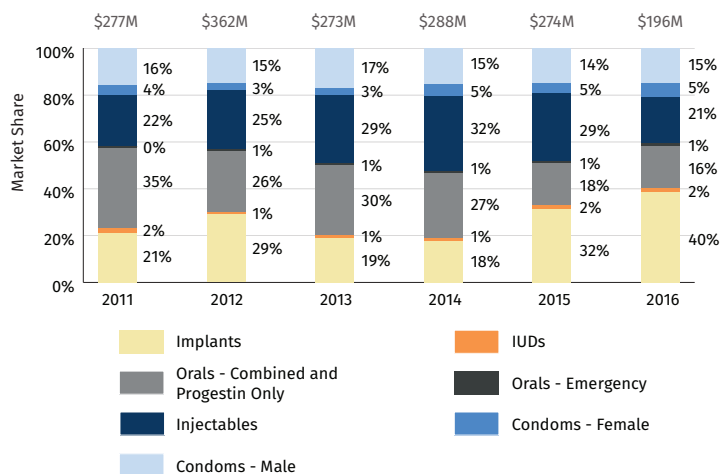


## EXHIBIT 5: FP2020 CONTRACEPTIVE SHIPMENT MIX (IN TERMS OF VOLUMES), CYP MIX (IN TERMS OF CYPS SHIPPED), AND MARKET SHARE (IN TERMS OF DOLLARS) BY YEAR

## CYP MIX (IN TERMS OF CYPS SHIPPED)

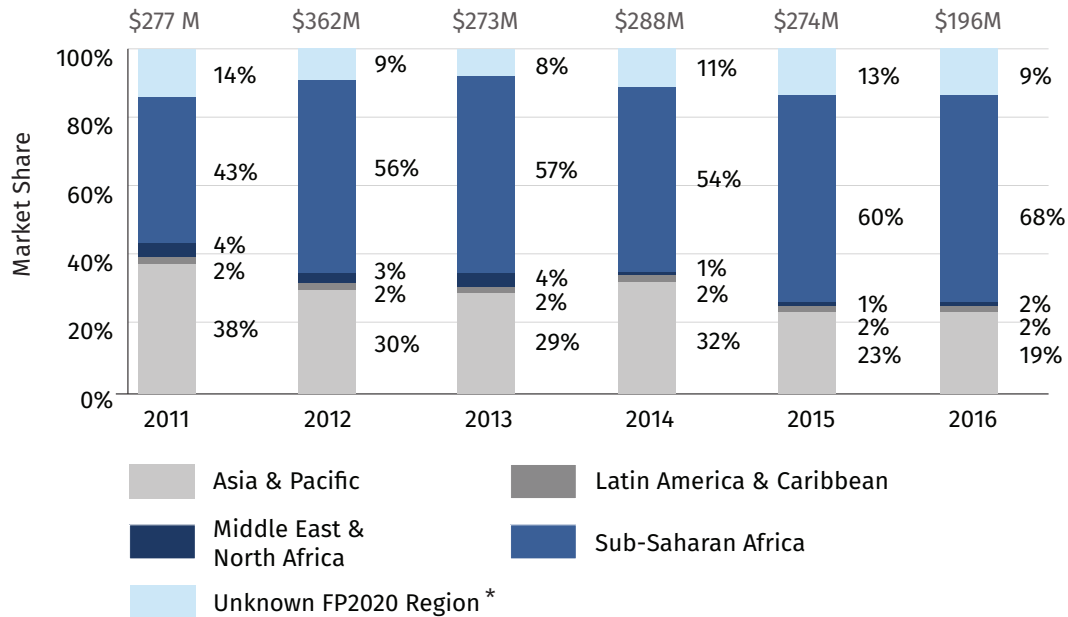


## MARKET SHARE (IN TERMS OF USD)



| SHIPMENT MIX (IN TERMS OF VOLUMES) | 2011          | 2012          | 2013          | 2014          | 2015          | 2016          |
|------------------------------------|---------------|---------------|---------------|---------------|---------------|---------------|
| Condoms - Female                   | 1.0%          | 0.8%          | 0.9%          | 1.3%          | 1.5%          | 1.8%          |
| Condoms - Male                     | 79%           | 80%           | 79%           | 78%           | 81%           | 82%           |
| Implants                           | 0.2%          | 0.2%          | 0.3%          | 0.3%          | 0.6%          | 0.8%          |
| Injectables                        | 3.6%          | 4.7%          | 4.7%          | 5.9%          | 5.8%          | 4.2%          |
| IUDs                               | 0.5%          | 0.4%          | 0.4%          | 0.5%          | 0.6%          | 0.9%          |
| Orals - Combined & Progestin Only  | 15%           | 14%           | 14%           | 14%           | 10%           | 10%           |
| Orals - Emergency                  | 0.1%          | 0.5%          | 0.2%          | 0.3%          | 0.4%          | 0.5%          |
| <b>Total Volumes</b>               | <b>2.04 B</b> | <b>2.32 B</b> | <b>1.98 B</b> | <b>1.92 B</b> | <b>1.68 B</b> | <b>1.18 B</b> |

**EXHIBIT 6: TOTAL FP2020 MARKET SHARE  
BY REGION**



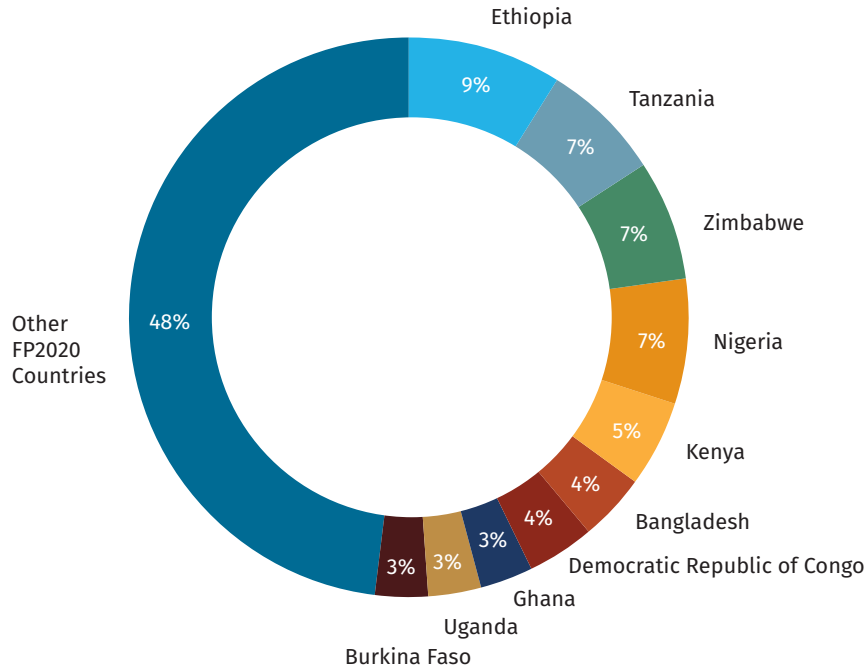
\*The "Unknown FP2020 Region" represents the proportion of shipment volumes to procurer warehouses where the final FP2020 destination is unknown. See Appendix C for further details.

| MARKET VALUE BY REGION (USD) | 2011          | 2012          | 2013          | 2014          | 2015          | 2016          |
|------------------------------|---------------|---------------|---------------|---------------|---------------|---------------|
| Asia & Pacific               | \$105M        | \$110M        | \$80M         | \$93M         | \$64M         | \$37M         |
| Latin America & Caribbean    | \$4M          | \$6M          | \$6M          | \$5M          | \$6M          | \$5M          |
| Middle East & North Africa   | \$10M         | \$9M          | \$10M         | \$4M          | \$3M          | \$4M          |
| Sub-Saharan Africa           | \$120M        | \$202M        | \$155M        | \$154M        | \$165M        | \$134M        |
| Known Regions                | \$239M        | \$328M        | \$251M        | \$256M        | \$238M        | \$179M        |
| Unknown FP2020 Region        | \$38M         | \$34M         | \$21M         | \$32M         | \$37M         | \$17M         |
| <b>Total</b>                 | <b>\$277M</b> | <b>\$362M</b> | <b>\$273M</b> | <b>\$288M</b> | <b>\$274M</b> | <b>\$196M</b> |

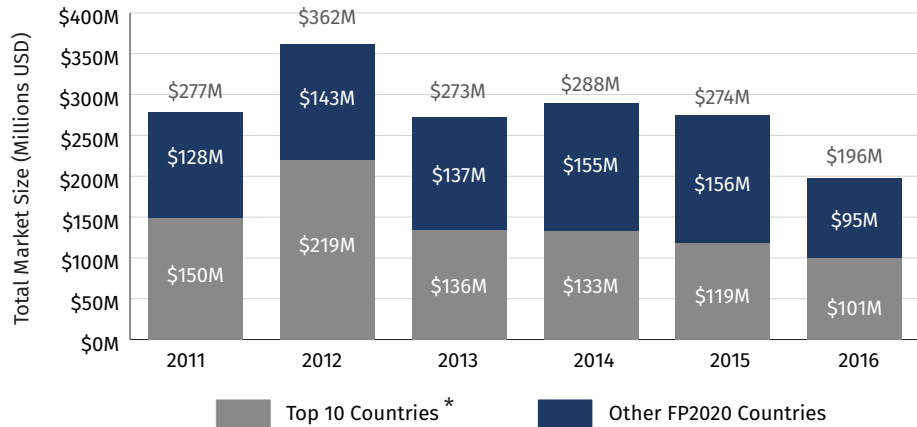
Note: The sum of individual stacked bars for all exhibits may differ slightly from totals due to rounding



**EXHIBIT 7: TOP 10 COUNTRIES IN TERMS OF MARKET SIZE, 2016**



**EXHIBIT 8: TOP 10 MARKETS IN TERMS OF MARKET VALUE (DETERMINED BY 2016 DATA) AND OTHER FP2020 MARKETS**



\* Top 10 countries include Ethiopia, Tanzania, Zimbabwe, Nigeria, Kenya, Bangladesh, Democratic Republic of Congo, Ghana, Uganda and Burkina Faso.

Note: The sum of individual stacked bars for all exhibits may differ slightly from totals due to rounding

Sources: [1] Historical Supplier-Reported Shipment Data; [2] RHI Shipment Data, May 2017; [3] USAID, "Couple-Years of Protection (CYP)," May 2017

**FROM 2015 TO 2016 THERE WAS A SUBSTANTIAL DECREASE IN DONOR SPENDING<sup>18</sup> IN THE 69 FP2020 COUNTRIES, AS RECORDED IN RHI<sup>19</sup>. PRIOR TO 2016, DONOR SPENDING WAS RELATIVELY STABLE FROM YEAR TO YEAR. THESE TRENDS ARE CONSISTENT WITH THE SUPPLIER SHIPMENT ANALYSIS FOR THE PERIOD OF 2011 TO 2016.**

**FROM 2015 TO 2016, DONOR SPENDING DECREASED FROM US\$186 MILLION TO US\$137 MILLION. CONSEQUENTLY, TOTAL CYPS FROM DONOR-FUNDED SHIPMENTS DECREASED BY 9 MILLION CYPS, FROM 65 MILLION CYPS IN 2015 TO 56 MILLION CYPS IN 2016.**

*This section uses shipment data from RHI to construct and analyze the donor-funded, FP2020 market for product-based modern methods, defined as volumes shipped from USAID, UNFPA, and other donors<sup>20</sup>, for the 69 FP2020 focus countries. It analyzes donor spending and donor-funded CYP trends from 2011 to 2016 as a subset of the overall FP2020 public sector market, as defined in the Supplier Shipment Analysis.*

**Despite an annual decrease of 4 percent in donor spending between 2011 and 2016, donor-funded CYPs declined only by 1 percent annually during that period due to the CYP mix shift towards implants.**

Donor spending decreased from US\$172 million in 2011 to US\$137 million in 2016, driven by the decline of donor-funded shipments across all methods, with the exception of implants. As a result, total CYPs shipped from donor-funded shipments remained relatively flat during this period, from 59 million CYPs shipped in 2011 to 56 million in 2016. (Exhibits 9, 10)

**The value of donor-funded shipments declined significantly between 2015 and 2016, with USAID showing a particularly noticeable decrease, potentially related to procurement patterns, which is explored further on page 14. A decrease in non-donor funded shipments was also apparent.**

UNFPA's spending for the total FP2020 public sector market was US\$80 million in 2016 compared to US\$92 million in 2015<sup>21</sup>, a decrease of 13 percent. The value for USAID's funded shipments declined from US\$89 million in 2015 to US\$53 million in 2016, a decrease of 40 percent. Other donors' spending decreased as well by 17 percent, from US\$5 million to US\$4 million, over the period. Finally, additional global markets visibility volumes<sup>21</sup>, which represent non-donor funded shipments in the total FP2020 public sector market as implied by supplier shipment data, decreased by 33 percent, from US\$89 million in 2015 to US\$59 million in 2016. (Exhibit 9)

**The purchasing patterns of both USAID and UNFPA reflect a notable shift in the CYP mix towards LARCs between 2011 and 2016.**

As USAID's CYP mix moved towards LARCs, USAID's shipments of short-acting methods decreased, from 66 percent of the CYP mix in 2011 to just over 50 percent in 2016. UNFPA's CYP mix also shifted to LARCs from short-acting methods. Short-acting methods made up half of UNFPA's CYP mix in 2011 and were only a third of the CYP mix in 2016. (Exhibit 11)

**LARCs now account for 63 percent of the donor-funded shipments CYP mix, but only 40 percent of donor spending.**

Although there was a decrease in donor-funded implants shipments from eight million in 2015 to six million in 2016, implants continued to rank first in terms of donor spending for contraceptive methods and CYPs shipped. Implants accounted for 39 percent of the total market value and 35 percent of the total donor-funded CYPs shipped in 2016. By contrast, the next two highest ranked methods, injectables and male condoms, each represented approximately 20 percent of the 2016 donor spending and around 15 percent of the donor-funded CYPs shipped.

18. Donor spending and value represented by donor-funded shipments is calculated as the average of UNFPA and USAID prices multiplied by the total units shipped in a particular year.  
19. RHI data is supplemented with data from USAID/ PSM systems to include the USAID-funded shipments not currently captured in RHI due to data integration issues.

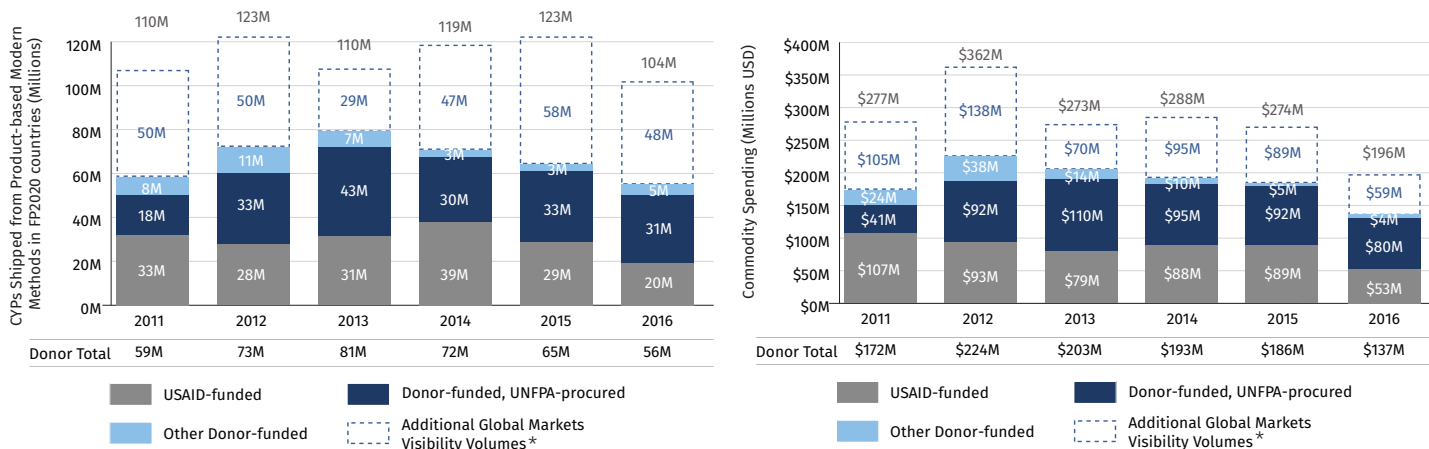
20. See Appendix D for further details on donors included.  
21. The previous Family Planning Market Report (2016) stated that UNFPA spent US\$94 million in 2015; the figure reported here is likely the result of data updates in RHI.

Although 2016 donor-funded shipments still accounted for 54 percent of the total CYPs shipped to the FP2020 public sector market compared to 53 percent in 2015, donor-funded CYPs declined by 14 percent between 2015 to 2016.

The total number of CYPs shipped from UNFPA remained relatively flat between 2015 and 2016; UNFPA shipped 31 million in total CYPs in 2016 compared to 33 million in 2015. USAID's total CYPs shipped declined

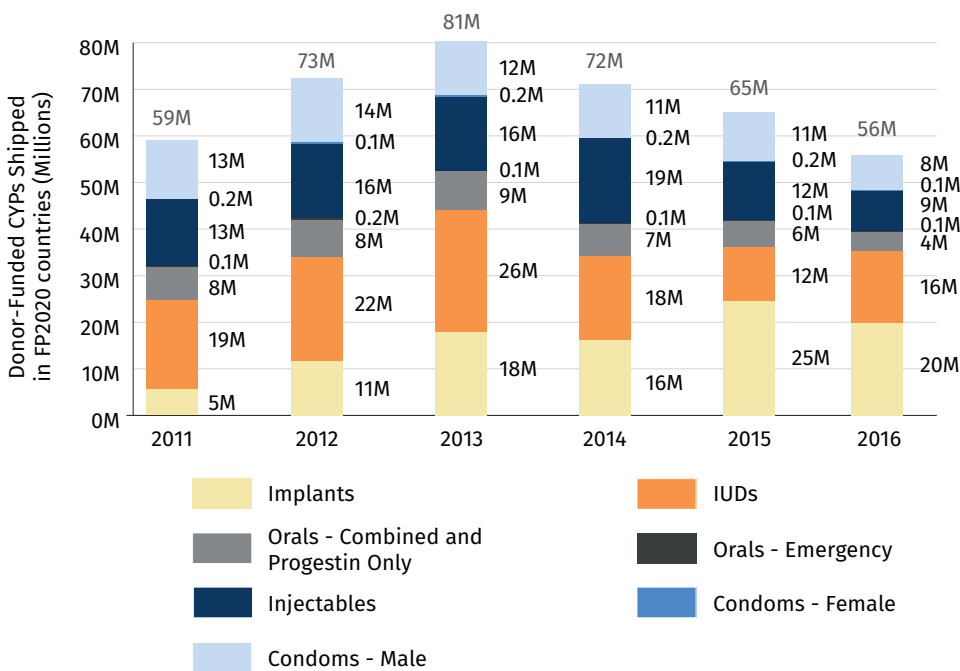
sharply from 29 million in 2015 to 20 million in 2016, a 33 percent decrease for the year. Other donor-funded CYPs increased by 54 percent, from three million to five million from 2015 to 2016, while the additional global markets visibility CYPs, which represent non donor-funded CYPs in the total FP2020 public sector market as implied by the supplier-reported data, decreased by 17 percent, from 58 million in 2015 to 48 million in 2016. (Exhibits 9, 10)

EXHIBIT 9: DONOR-SUPPORTED CYPs & COMMODITY SPEND



\*Additional global markets visibility volumes is derived from subtracting the donor-funded volumes as seen in RHI from the supplier-reported data. This high-level calculation assumes the supplier-reported data includes the majority of donor-funded volumes and thus the remainder can be attributed to other donor volumes not captured by RHI, and/or other public and social sector volumes.

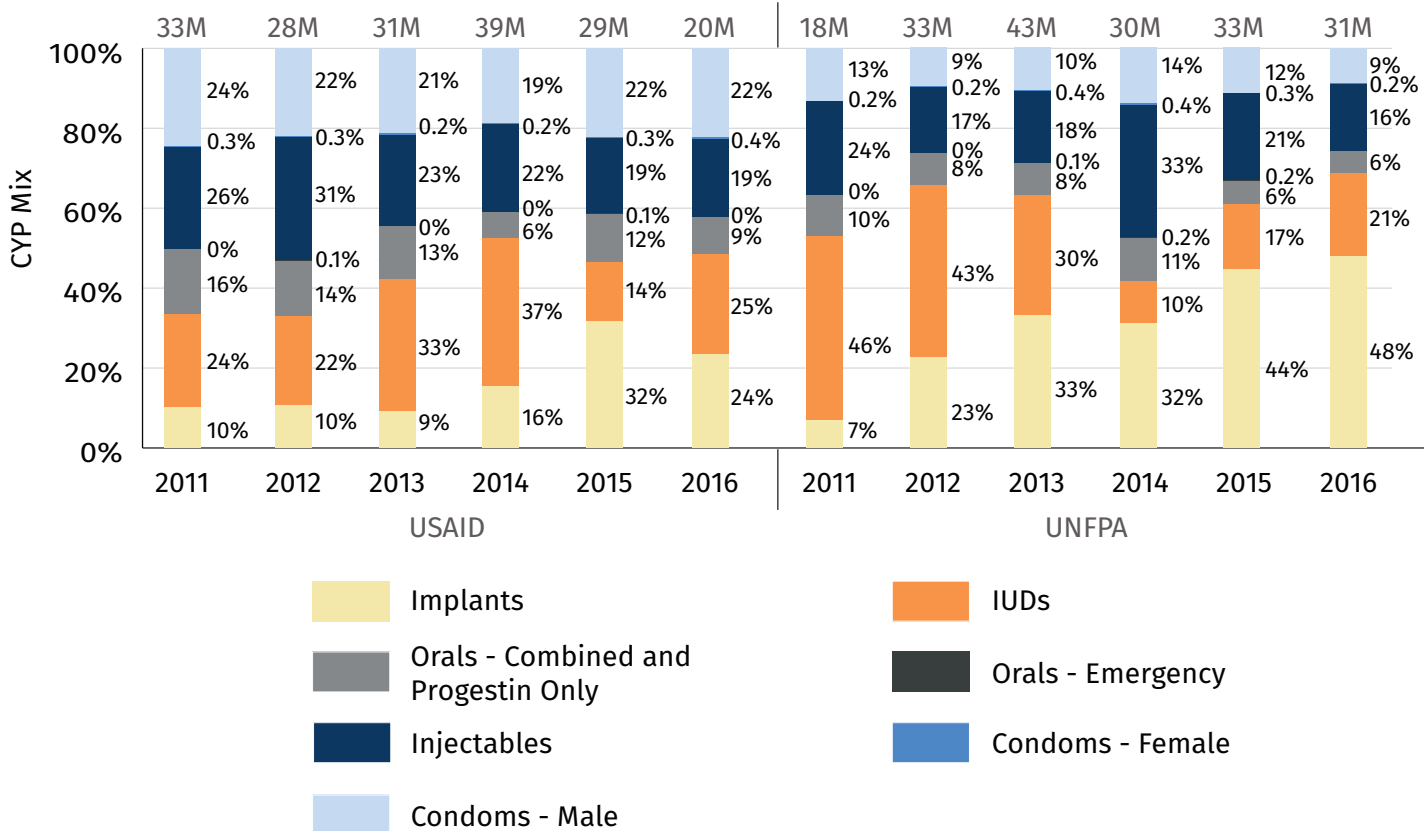
EXHIBIT 10: CYPs IMPLIED BY DONOR-FUNDED SHIPMENTS BY METHOD



Note: The sum of individual stacked bars for all exhibits may differ slightly from totals due to rounding

Sources: [1] Historical Supplier-Reported Shipment Data; [2] RHI Shipment Data, May 2017 [3] UNFPA Contraceptive Price Indicator, 2011–2016; [4] USAID, "Couple-Years of Protection (CYP)," May 2017; [6] IAP Implant Price

EXHIBIT 11: CYP MIX IMPLIED BY USAID & UNFPA PROCUREMENT



Sources: [1] RHI Shipment Data, May 2017 [2] USAID, "Couple-Years of Protection (CYP)," May 2017

## PUBLICLY AVAILABLE DATA FROM BANGLADESH, INDIA, AND INDONESIA SUPPORTS THE HYPOTHESIS THAT NON DONOR-FUNDED LOCAL/REGIONAL SUPPLIERS<sup>22</sup> ARE PLAYING A LARGER ROLE IN PROCUREMENT IN THESE COUNTRIES.

*This section uses publicly available data sources, e.g. MOHFW or government tender documents, to further examine high volume countries, as previously published in the 2016 Family Planning Market Report.*

**In Bangladesh, the procurement of product-based modern contraceptives has decreased from 13 million CYPs to eight million CYPs from 2015 to 2016. However, consumption has remained steady over the same period.**

The Bangladesh Ministry of Health and Family Welfare (MOHFW) procured 13 million CYPs for the 2015 calendar year, as compared to eight million CYPs<sup>23</sup> for the 2016 calendar year. Procurement contracts for product-based contraceptives were awarded primarily to regional and local suppliers, including (but not limited to): Essential Drugs Co. Ltd., Helm AG, HLL Lifecare Limited, Khulna Essential Latex Plant (KELP), Maneesh Pharma, MSD/Organon (India) Pvt Ltd.<sup>24</sup>, MSD B.V.<sup>25</sup>, M/S, Reneta Ltd., Popular Pharma, Sarban International Ltd., and Techno Drugs from Bangladesh. As noted, since coverage for this report is limited to those participating suppliers, only the data from a subset of these manufacturers<sup>26</sup> is included in the current calculation of market value derived from the supplier shipment data. By applying the same prices<sup>27</sup> used for 2015 and 2016 supplier shipment volumes to the volumes from the Bangladesh MOHFW procurement contracts, we estimated the implied value from those contracts to be US\$41 million and US\$31 million for 2015 and 2016, as compared to the US\$19 million to US\$9 million implied by the 2015 and 2016 supplier shipment data.

In addition, a review of Bangladesh's supply chain reports revealed that consumption of contraceptive commodities has been fairly consistent, between 11 and 12 million CYPs from 2011 to 2016, and that the lower 2016 procurement levels did correspond to a decrease in year-end stock levels, but that it did not affect the level of consumption.

**In India, there was a slight increase in the number of CYPs procured from product-based modern methods between the 2010/2011 fiscal year and the 2014/2015 fiscal year, while sterilization remained constant at around four million operations per year.**

Based on India's Ministry of Health and Family Welfare (MOHFW) Annual Report<sup>28</sup> for the 2014/2015 fiscal year, which ends on March 31, CYPs from product-based modern methods<sup>29</sup> totaled 58 million for that fiscal

year, compared to 54 million in the 2010/2011 fiscal year while sterilizations remained steady at four million performed for the 2014/2015 fiscal year. While the MOHFW annual report shipment volumes are based on the 2014/2015 fiscal year instead of the calendar year used in this report, by applying the same prices<sup>27</sup> used for 2014 and 2015 supplier shipment volumes, we estimate that implied market value from the annual reports is approximately US\$68 million in 2014/2015 fiscal year, as compared to the US\$1 to US\$5 million implied by the 2014 and 2015 supplier shipment data<sup>30</sup>.

**In Indonesia, CYPs procured from product-based modern methods increased from 17 million in 2015 to 23 million in 2016.**

Data from public tender documents published by National Family Planning Coordinating Body (BKKBN) indicated an increase in CYPs procured from product-based methods<sup>31</sup>, from 17 million in 2015 to 23 million in 2016. By applying the same prices<sup>27</sup> used for the 2015 and 2016 supplier shipment volumes, we estimate that the total implied market value from these tender documents is US\$57 million in 2015 and US\$75 million in 2016, as compared to the less than US\$1 million and US\$3 million implied by the 2015 and 2016 supplier shipment data.

The data also shows that the Indonesian procurement contracts were awarded primarily to regional and local suppliers, including: PT Catur Dakwah Crane Farmasi, PT Harsen Laboratories, PT Kimia Farma, PT Triyasa Nagamas Farma, PT Pratapa Nirmala, PT Sunthi Sepuri, and PT Tunggal. Among them, PT Tunggal is the only supplier currently participating in this report, as part of the GEMs Caucus<sup>32</sup>.

Additional information about these three markets can be found in Appendix E.

22. Many of these suppliers are not participating in this report; CHAI is actively seeking the participation of relevant suppliers to increase market visibility.

23. Procured methods from Bangladesh's MOHFW report include male condoms, orals, injectables and implants.

24. MSD/Organon (India) Pvt Ltd. is a Merck/MSD company and therefore not a regional or local supplier.

25. MSD B.V. is a Merck/MSD company and therefore not a regional or local supplier.

26. Manufacturers participating in this report include Helm AG from Germany, Merck/MSD from the Netherlands, and Techno Drugs from Bangladesh.

27. See Appendix C for more details on unit prices used for market value calculations.

28. While the MOHFW Annual Reports do not record identities of the awarded suppliers, a US-AID report has enabled the identification of local suppliers and the contraceptives that supply to the government and SMO programs as of 2006, including (but not limited to): Indian Drug and Pharmaceutical Ltd. (IDPL), HLL Lifecare Limited, Phaarmasia, Pregna International, SMB

Corporation, Cipla, Win-Medicare, and Famy Care, now known as Mylan. This list was further validated by in-country partners. Of these suppliers, Pregna International, SMB Corporation, Cipla, and Mylan currently participate in this report.

29. Procured methods from India's MOHFW reports include male condoms, IUDs, orals, and emergency contraception.

30. The latest data from India referenced in this report is from the 2014 to 2015 fiscal year and thus is compared to the corresponding supplier shipment data from 2014 and 2015.

31. Procured methods from Indonesia's MOHFW reports include implants, injectables, and orals.

32. The Generic Manufacturers Caucus for Reproductive Health (GEMS Caucus) comprises generic pharmaceutical manufacturers throughout Asia, Africa, and Europe, united in their commitment to provide safe, quality-assured family planning products that enable women to make choices about their reproductive health; available at <https://www.rhsupplies.org/activities-resources/groups/generic-manufacturers-caucus/>.

## CHAI CONSULTED KEY PARTICIPATING SUPPLIERS AS WELL AS OTHER FAMILY PLANNING PARTNERS AND STAKEHOLDERS TO IDENTIFY POTENTIAL REASONS FOR THE 2015 TO 2016 FP2020 PUBLIC SECTOR MARKET DECLINE, THE MOST COMMON OF WHICH ARE DISCUSSED HERE. FURTHER RESEARCH BEYOND THE SCOPE OF THIS REPORT WOULD BE REQUIRED TO CONFIRM THESE HYPOTHESES.

**Hypothesis #1: The decline in overall FP2020 public sector shipments may be a real decline driven by decreased donor-funded shipments. Governments and other procurers may not be sufficiently covering the shortfall.**

From 2012 to 2016, CYPs shipped to the total FP2020 public sector decreased by 19 million, and donor-funded CYPs shipped also declined by a similar amount of 17 million, which could indicate that there is direct correlation between the lower volumes of donor-funded contraceptives shipped and the decline in overall FP2020 public sector shipments.

**Hypothesis #2: A greater share of public sector procurement may have shifted to local and regional suppliers not yet participating in this report.**

Certain currently participating suppliers contend that, in large countries such as Bangladesh, India, Indonesia, and Pakistan, procurement is shifting from donor-supported suppliers to local and regional suppliers who are not donor-supported. CHAI refreshed its 2016 analysis of Bangladesh, India, and Indonesia for this report, and the data derived from purchase orders and procurement reports from these three countries' governments seem to support this hypothesis.<sup>33</sup>

CHAI's work to expand market visibility in such large countries has enabled the identification of these local and regional suppliers and provided CHAI with the opportunity to solicit their participation in the report. So far, one additional supplier has signed on and its data is included in this year's report. Moving forward, CHAI will continue to engage and actively seek the participation of relevant suppliers to increase visibility.

**Hypothesis #3: The significant decline in shipment volume from 2015 to 2016 may have been part of the natural fluctuation in procurement patterns from year to year and may not necessarily be indicative of current consumption trends.**

It is widely understood among supply chain and procurement professionals that countries procure stock based on their unique in-country supply chains and in-country demand, both of which may vary year to year as programs are scaled up or down. Therefore, some plausible explanations for the 2016 shipment decline could include: there were sufficient inventory levels at the end of year 2015 in certain countries, thus said countries decided to procure less in 2016; some countries may have decided to procure the bulk of their shipments in late 2015 and early 2017 (Bangladesh appears to be one such example based on the government procurement reports); and, 2016 was a transition year for USAID as it moved from one procurement agent, USAID | DELIVER, to another, USAID Procurement and Supply Management (PSM), which may have contributed to overstocking in prior years and under-procurement in 2016.

Procurement Planning and Monitoring Report (PPMR) data<sup>34</sup> for 34 countries provides an encouraging picture, with overall consumption remaining relatively stable from 2015 to 2016 in addition to a stable trend reflected in the Bangladesh MOHFW supply chain reports from 2011 to 2016 specifically. This evidence could thus indicate that procurement patterns are indeed simply following their natural fluctuation.

33. In the 2016 FP Market Report, CHAI conducted additional markets visibility analyses into three of these countries, Bangladesh, India, and Indonesia. This analysis has been refreshed and the outcomes detailed on page 13 of this report.

34. Procurement Planning and Monitoring Report is available at <http://ppmr.rhsupplies.org/content?id=1>. See Appendix B for more details.

## THE AVAILABILITY OF FUTURE FUNDING FOR CONTRACEPTIVE COMMODITIES COULD SIGNIFICANTLY IMPACT THE FAMILY PLANNING COMMODITY MARKET.

A number of recent analyses, including RHSC's 2016 Global Contraceptive Commodity Gap Analysis<sup>35</sup>, have identified significant funding gaps based on current and existing family planning spending levels. US\$500 million would be needed from 2017 to 2020 to address the public sector funding gaps in 20<sup>36</sup> of the largest FP2020 countries alone<sup>37</sup>. In addition, there is continued uncertainty with regard to the U.S. government's financial commitment to family planning moving forward<sup>38</sup>. Any significant funding cuts could exacerbate the funding constraint as USAID's estimated contribution to family planning accounts for 28 percent of

the direct funding for contraceptives and distribution in the developing world<sup>39</sup>. Further, it is unclear whether the committed funding stemming from new initiatives such as SHE DECIDES and the recent 2017 London Family Planning Summit will be sufficient to cover the funding gaps. Should the funding challenges remain unaddressed, there could be a decline in the public sector family planning commodity market and subsequently, in the number of users of modern methods of contraception.

35. RHSC Global Contraceptive Commodity Gap Analysis, available at [https://www.rhsupplies.org/uploads/tx\\_rhscpublications/Global\\_Contraceptive\\_Commodity\\_Gap\\_Analysis\\_2016.pdf](https://www.rhsupplies.org/uploads/tx_rhscpublications/Global_Contraceptive_Commodity_Gap_Analysis_2016.pdf)

36. The 20 countries include: Bangladesh, Burkina Faso, Cameroon, Democratic Republic of Congo, Côte d'Ivoire, Ethiopia, Ghana, Kenya, Lao PDR, Liberia, Malawi, Mauritania, Mozambique, Niger, Nigeria, Rwanda, Senegal, Tanzania, Togo, and Uganda.

37. In 2016, these countries represented ~57 percent of the 69 FP2020 public sector market, as defined by this report.

38. In May 2017, the current U.S. administration proposed to eliminate funding for international family planning programs for fiscal year 2018 (FY 2018). (<https://www.whitehouse.gov/sites/whitehouse.gov/files/omb/budget/fy2018/msar.pdf>, accessed July 17th 2017). In July 2017, the

House Committee on Appropriations approved the FY 2018 State & Foreign Operations (SFOPs) Bill. (<https://appropriations.house.gov/uploadedfiles/bills-115hr-sc-ap--stateforop-fy2018state-foreignoperationsappropriations.pdf>, accessed September 22nd, 2017). In September 2017, the Senate Committee on Appropriations approved the FY 2018 SFOPs Bill. (<https://www.appropriations.senate.gov/imo/media/doc/FY2018%20State%20Foreign%20Operations%20Appropriations%20Bill%20-%20S1780.pdf>, accessed September 22nd 2017).

39. Available at <https://www.vox.com/policy-and-politics/2017/5/24/15681216/trump-budget-cuts-funding-global-family-planning-famine-relief>

## About the Global Markets Visibility Project

The Global Markets Visibility Project is a landmark initiative that resulted in the publication of the first Family Planning Market Report in May 2015, which provided the community with its first detailed glimpse into the public sector family planning market across the 69 FP2020 countries. This is the third iteration of the report. The initiative provides insightful and strategic outputs for donors, MOHs, implementing organizations, and suppliers to develop and implement more effective strategies aimed at ensuring that an additional 120 million women in the world's 69 poorest countries are enabled to use family planning products and services by 2020. This report is a joint collaboration with the Reproductive Health Supplies Coalition (RHSC). The initial 2015 report comprised data from 11 manufacturers. Each manufacturer entered into a formal MOU with CHAI or provided their information through collaborations with the Generic Manufacturers Caucus for Reproductive Health (GEMs) and i+solutions. Coverage has expanded since the publication of the initial report, with 14 suppliers currently participating in the project. Donors, suppliers, and partners expressed strong interest to continue this project, build on our progress, and strengthen the family planning community's market knowledge.

## About the Participating Suppliers

### Bayer

Bayer is a Germany-based life science company with core competencies in health care and agriculture. Its contraceptive product portfolio includes contraceptive implants, LNG-IUS, combined oral contraceptives, and injectables.

### CR Zizhu

China Resources Zizhu Pharmaceutical Co., Ltd. (CR Zizhu) is a manufacturer of reproductive health products based in China. Its contraceptive product portfolio includes emergency oral contraceptives and combined oral contraceptives.

### Cipla

Cipla Limited is an India-based generic manufacturer with over 1,500 products in the areas of respiratory diseases, HIV/AIDS, malaria, MDRTB, and reproductive health. Its contraceptive product portfolio includes emergency contraceptives and combined oral contraceptives.

### Cupid

Cupid Limited is a manufacturer of both male and female condoms based in India. Its services include contract manufacturing (e.g., Playboy condoms, Trust condoms) and research and development, as well as the marketing and manufacturing of its own branded products.

### Mylan

Mylan is a U.S. based healthcare company with over 7,500 marketed products. Its contraceptive product portfolio includes orals (combined, progestin only, and emergency) and injectable contraceptives, IUDs, and tubal rings used for female sterilization<sup>40</sup>.

### Helm AG

Helm AG is a Germany-based family owned multifunctional distribution company specializing in: Chemicals (Feedstocks and Derivatives), Crop Protection, Active Pharmaceutical Ingredients, Pharmaceuticals and Medical Products, and Fertilizers. Its main contraceptive product is a 3-month injectable DMPA IM.

## Market Definition, Scope, and Coverage

The total FP2020 public sector market referenced in this report only includes data for the public sector in the 69 FP2020 countries, which is defined as volumes purchased by institutional buyers (USAID, UNFPA, SMOs, etc.) and MOH or government-affiliated procurers.

Although significant efforts have been deployed to collect as much data as possible, it should be noted that this report may not represent the entirety of institutional purchases for the FP2020 public sector, as it includes data from the majority, but not all of the suppliers associated with these markets.

### Merck/MSD

Merck/ MSD is a U.S. based healthcare company. Its contraceptive product portfolio includes contraceptive implants (Implanon) NXT, oral contraceptives (Exluton, Marvelon, Cerazette), and the contraceptive vaginal ring (NuvaRing).

### Pfizer

Pfizer is a U.S. based healthcare company. Its contraceptive product portfolio includes 3-month injectable DMPA IM (Depo-Provera) and 3-month injectable DMPA SC (Sayana Press).

### Pregna

Pregna is a manufacturer of contraceptive products based in India. Its contraceptive product portfolio includes LNG-IUS (Eloira), IUDs, and tubal rings used for female sterilization.

### PT Tunggall

PT. Tunggall Idaman Abdi (PT Tunggall) is a pharmaceutical manufacturer focusing on reproductive healthcare based in Indonesia. Its contraceptive product portfolio includes a monthly injectable, a 3-month injectable, a combined oral contraceptive, and an emergency oral contraceptive.

### Shanghai Dahua

Shanghai Dahua Pharmaceutical Co., Ltd (Dahua) is a manufacturer of contraceptive implants based in China. On June 30th, 2017, the World Health Organization (WHO) pre-qualified Dahua's Levoplant (formerly known as Sino Implant II).

### SMB

SMB is a manufacturer of medical devices, including IUDs and surgical sutures, based in India. Its key contraceptive product is IUDs, including its Copper T 380A, TCu 380Ag, TCu 380 Plus, and SMB Cu 375.

40. The procurement of products used for sterilization such as tubal rings are not covered in this report as the scope is limited to product-based modern methods of contraception.



**Techno Drugs**

Techno Drugs Ltd. is a manufacturer of both human and veterinary medicines based in Bangladesh. Its contraceptive product portfolio includes combined oral contraceptives and injectables. For injectables, Techno Drugs has also served as a supplier to Helm AG previously.

**Veru Healthcare**

Veru Healthcare, formerly known as the Female Health Company prior to the merger with Aspen Park Pharmaceuticals, Inc., is a biopharmaceutical company based in the US, focusing on urology and oncology. The company's division, the Female Health Company, is focusing on the global public health sector business with its FC2 female condom. FC2 is approved by FDA and WHO pre-qualified for offering dual protection against sexually transmitted infections and unintended pregnancy.

APPENDICES  
APPENDIX A69 FP2020 COUNTRIES MARKET VOLUMES BY METHOD<sup>41</sup> AND COUNTRY<sup>42</sup>, 2011–2016

| EXHIBIT A.1: 69 FP2020 COUNTRIES CONTRACEPTIVE MARKET VOLUMES BY METHOD, 2011 |                          |          |             |           |             |
|-------------------------------------------------------------------------------|--------------------------|----------|-------------|-----------|-------------|
| COUNTRY                                                                       | CONDOMS<br>MALE & FEMALE | IMPLANTS | INJECTABLES | IUDS      | ORALS       |
| Afghanistan                                                                   | 19,572,826               | 0        | 1,395,200   | 67,000    | 807,674     |
| Bangladesh                                                                    | 112,426,800              | 422,109  | 18,984,000  | 475,000   | 138,631,121 |
| Benin                                                                         | 13,249,064               | 48,600   | 10,300      | 21,000    | 0           |
| Bhutan                                                                        | 2,880,000                | 0        | 475,200     | 1,600     | 88,002      |
| Bolivia                                                                       | 1,570,360                | 2,350    | 0           | 35,000    | 210,000     |
| Burkina Faso                                                                  | 0                        | 2,000    | 0           | 0         | 1,597,501   |
| Burundi                                                                       | 14,673,200               | 44,600   | 0           | 39,000    | 33,335      |
| Cambodia                                                                      | 1,764,000                | 19,000   | 0           | 20,000    | 20,000      |
| Cameroon                                                                      | 0                        | 11,500   | 0           | 31,000    | 50,200      |
| Central African Republic                                                      | 6,410,600                | 500      | 200         | 0         | 91,403      |
| Chad                                                                          | 1,567,600                | 15,000   | 52,000      | 1,000     | 0           |
| Comoros                                                                       | 1,008,000                | 1,024    | 26,800      | 100       | 0           |
| Democratic Republic of Congo                                                  | 73,252,800               | 8,500    | 350,000     | 26,000    | 1,295,595   |
| Congo Rep                                                                     | 20,566,352               | 10       | 1,412,400   | 500       | 391,905     |
| Cote d'Ivoire                                                                 | 34,967,400               | 0        | 630,800     | 10,000    | 2,613,145   |
| Djibouti                                                                      | 590,240                  | 0        | 0           | 1,500     | 0           |
| Egypt Arab Rep                                                                | 50,400                   | 17,500   | 4,780,000   | 2,135,000 | 3,000,000   |
| Eritrea                                                                       | 7,804,000                | 5,100    | 0           | 5,500     | 61,672      |
| Ethiopia                                                                      | 146,223,384              | 382,704  | 5,471,200   | 420,000   | 7,752,440   |
| Gambia                                                                        | 1,585,000                | 100      | 10,000      | 500       | 433,337     |
| Ghana                                                                         | 5,514,000                | 57,674   | 3,044,000   | 0         | 0           |
| Guinea                                                                        | 7,932,400                | 1,000    | 546,240     | 11,000    | 233,335     |
| Guinea-Bissau                                                                 | 1,555,000                | 5,000    | 0           | 0         | 5,001       |
| Haiti                                                                         | 54,534,096               | 0        | 976,800     | 0         | 200,001     |
| Honduras                                                                      | 19,202,400               | 0        | 148,000     | 22,453    | 943,300     |
| India                                                                         | 0                        | 0        | 193,201     | 1,959,570 | 8,661,563   |
| Indonesia                                                                     | 210,000                  | 0        | 0           | 316,721   | 50,001      |
| Iraq                                                                          | 0                        | 0        | 0           | 75,000    | 2,633,250   |
| Kenya                                                                         | 48,266,720               | 505,209  | 1,370,032   | 0         | 15,136,914  |
| Korea Dem Rep                                                                 | 1,267,200                | 0        | 0           | 36,150    | 139,500     |
| Kyrgyz Republic                                                               | 5,202,600                | 0        | 0           | 160,000   | 0           |
| Lao PDR                                                                       | 8,484,208                | 6,200    | 650,000     | 0         | 922,112     |
| Lesotho                                                                       | 8,356,936                | 2,000    | 65,000      | 0         | 63,000      |

41. Female condoms are aggregated with male condoms by country in order to protect data confidentiality.

42. Other FP2020 shipment volumes include shipments to procurer (USAID, UNFPA, SMOs) warehouses in non-FP2020 countries, such as Belgium, Denmark, France, Germany, Netherlands, Norway, Sweden, Switzerland, UK, and US. Although these volumes were shipped to

non-FP2020 countries, the end shipment destination of these volumes would likely be the 69 FP2020. As a result, these non-FP2020 volumes were included in the total shipments to 69 FP2020 countries after it was confirmed that the specific non-FP2020 volumes were associated with institutional purchases.

APPENDICES  
APPENDIX A

| EXHIBIT A.1: 69 FP2020 COUNTRIES CONTRACEPTIVE MARKET VOLUMES BY METHOD, 2011 |                          |          |             |           |            |
|-------------------------------------------------------------------------------|--------------------------|----------|-------------|-----------|------------|
| COUNTRY                                                                       | CONDOMS<br>MALE & FEMALE | IMPLANTS | INJECTABLES | IUDS      | ORALS      |
| Liberia                                                                       | 22,048,800               | 3,000    | 423,200     | 0         | 0          |
| Madagascar                                                                    | 24,254,800               | 124,318  | 1,913,600   | 4,500     | 324,550    |
| Malawi                                                                        | 11,886,001               | 46,452   | 540,000     | 0         | 50,000     |
| Mali                                                                          | 1,000                    | 53,600   | 1,292,625   | 41,501    | 0          |
| Mauritania                                                                    | 3,600,000                | 3,728    | 6,000       | 5,500     | 533,336    |
| Mongolia                                                                      | 10,002,880               | 1,000    | 0           | 0         | 321,000    |
| Mozambique                                                                    | 96,394,000               | 5,010    | 1,241,400   | 41,000    | 5,393,262  |
| Myanmar                                                                       | 56,563,712               | 4,000    | 0           | 0         | 6,918,499  |
| Nepal                                                                         | 33,641,000               | 0        | 327,600     | 10,000    | 250,000    |
| Nicaragua                                                                     | 13,356,000               | 0        | 332,100     | 50,000    | 842,001    |
| Niger                                                                         | 10,000                   | 4,612    | 814,000     | 2,800     | 400,000    |
| Nigeria                                                                       | 78,948,652               | 32,900   | 3,157,500   | 209,000   | 1,055,335  |
| Pakistan                                                                      | 249,431,800              | 25,300   | 5,862,000   | 200,000   | 400,299    |
| Papua New Guinea                                                              | 2,500,000                | 2,000    | 0           | 0         | 1,663,200  |
| Philippines                                                                   | 740,800                  | 0        | 0           | 0         | 6,639,745  |
| Rwanda                                                                        | 30,211,488               | 0        | 1,768,400   | 18,600    | 0          |
| Sao Tome and Principe                                                         | 2,190,600                | 0        | 852,075     | 200       | 47,129     |
| Senegal                                                                       | 11,400,000               | 10,350   | 0           | 3,000     | 220,000    |
| Sierra Leone                                                                  | 4,515,800                | 91,700   | 0           | 35,500    | 1,206,269  |
| Solomon Islands                                                               | 30,000                   | 0        | 0           | 0         | 24,000     |
| Somalia                                                                       | 0                        | 0        | 0           | 0         | 0          |
| South Sudan                                                                   | 4,161,000                | 0        | 0           | 0         | 0          |
| Sri Lanka                                                                     | 779,600                  | 10,000   | 0           | 80,000    | 2,191,240  |
| Sudan                                                                         | 10,591,344               | 3,500    | 0           | 2,000     | 1,167,875  |
| Tajikistan                                                                    | 10,105,072               | 5,440    | 0           | 150,000   | 0          |
| Tanzania                                                                      | 29,772,456               | 240,104  | 6,176,400   | 25,000    | 1,410,170  |
| Timor-Leste                                                                   | 57,600                   | 1,100    | 0           | 3,500     | 145,002    |
| Togo                                                                          | 14,392,368               | 16,500   | 0           | 6,400     | 12,663     |
| Uganda                                                                        | 82,319,600               | 86,688   | 2,089,800   | 83,785    | 334,220    |
| Uzbekistan                                                                    | 5,414,112                | 0        | 0           | 1,500,000 | 600,000    |
| Vietnam                                                                       | 15,049,000               | 9,000    | 1,180,000   | 1,772,000 | 0          |
| West Bank and Gaza                                                            | 4,521,600                | 0        | 0           | 0         | 0          |
| Western Sahara                                                                | 0                        | 0        | 0           | 0         | 0          |
| Yemen Rep                                                                     | 829,440                  | 6,625    | 2,001,875   | 30,000    | 3,971,120  |
| Zambia                                                                        | 58,807,168               | 0        | 1,544,200   | 0         | 748,000    |
| Zimbabwe                                                                      | 126,944,000              | 61,900   | 782,500     | 2,600     | 14,836,223 |
| Other FP2020 Shipment Volumes                                                 | 6,937,864                | 692,800  | 385,700     | 145,850   | 76,285,355 |

Sources: [1] Historical Supplier-Reported Shipment Data; [2] RHI Shipment Data, May 2017.

APPENDICES  
APPENDIX A

EXHIBIT A.2: 69 FP2020 COUNTRIES CONTRACEPTIVE MARKET VOLUMES BY METHOD, 2012

| COUNTRY                      | CONDOMS<br>MALE & FEMALE | IMPLANTS  | INJECTABLES | IUDS      | ORALS       |
|------------------------------|--------------------------|-----------|-------------|-----------|-------------|
| Afghanistan                  | 12,418,680               | 3,000     | 619,300     | 30,000    | 199,470     |
| Bangladesh                   | 26,736,000               | 512,800   | 18,562,000  | 515,000   | 146,646,964 |
| Benin                        | 21,806,400               | 16,500    | 0           | 19,000    | 0           |
| Bhutan                       | 3,456,000                | 0         | 70,000      | 0         | 97,899      |
| Bolivia                      | 121,000                  | 25,300    | 0           | 6,000     | 3,000       |
| Burkina Faso                 | 16,741,200               | 117,100   | 1,369,900   | 16,500    | 2,348,935   |
| Burundi                      | 6,272,000                | 120,000   | 996,000     | 175,000   | 608,160     |
| Cambodia                     | 748,656                  | 29,676    | 307,600     | 58,650    | 1,125,338   |
| Cameroon                     | 3,162,000                | 12,300    | 0           | 20,000    | 17,840      |
| Central African Republic     | 3,415,400                | 13,600    | 198,400     | 1,000     | 1,031,664   |
| Chad                         | 70,000                   | 25,800    | 30,000      | 3,000     | 0           |
| Comoros                      | 576,000                  | 500       | 15,000      | 0         | 17,199      |
| Democratic Republic of Congo | 148,830,600              | 46,800    | 1,344,000   | 39,000    | 4,210,965   |
| Congo Rep                    | 7,018,400                | 300       | 800,000     | 0         | 0           |
| Cote d'Ivoire                | 37,371,000               | 16,456    | 700,000     | 0         | 2,455,000   |
| Djibouti                     | 519,680                  | 0         | 0           | 500       | 96,000      |
| Egypt Arab Rep               | 2,185,920                | 45,000    | 5,000,000   | 338,000   | 4,746,366   |
| Eritrea                      | 100,000                  | 100       | 0           | 0         | 21,600      |
| Ethiopia                     | 173,877,714              | 1,471,188 | 16,429,200  | 257,200   | 8,545,593   |
| Gambia                       | 1,000                    | 5,000     | 1,000       | 0         | 24,000      |
| Ghana                        | 7,605,000                | 196,460   | 2,172,000   | 0         | 120,000     |
| Guinea                       | 4,428,640                | 7,000     | 713,000     | 2,600     | 1,650,800   |
| Guinea-Bissau                | 730,000                  | 10,000    | 14,000      | 22,000    | 4,641       |
| Haiti                        | 69,799,680               | 6,000     | 1,607,200   | 1,000     | 346,560     |
| Honduras                     | 9,772,992                | 0         | 691,900     | 19,400    | 1,810,800   |
| India                        | 0                        | 0         | 134,494     | 2,973,600 | 5,750,000   |
| Indonesia                    | 250,000                  | 0         | 0           | 588,850   | 0           |
| Iraq                         | 0                        | 0         | 0           | 0         | 3,252,000   |
| Kenya                        | 151,368,000              | 176,556   | 9,631,025   | 25,000    | 4,503,281   |
| Korea Dem Rep                | 2,592,000                | 0         | 51,000      | 30,000    | 351,999     |
| Kyrgyz Republic              | 26,602,800               | 0         | 5,600       | 255,000   | 482,880     |
| Lao PDR                      | 2,865,600                | 1,600     | 605,000     | 13,000    | 2,676,480   |
| Lesotho                      | 1,749,200                | 0         | 110,000     | 0         | 0           |
| Liberia                      | 6,286,945                | 18,000    | 0           | 0         | 4,860       |
| Madagascar                   | 3,151,400                | 174,336   | 2,896,200   | 0         | 2,881,680   |
| Malawi                       | 19,956,960               | 182,744   | 4,922,400   | 6,000     | 125,791     |
| Mali                         | 6,433,920                | 55,000    | 168,800     | 18,000    | 2,314,375   |

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| EXHIBIT A.2: 69 FP2020 COUNTRIES CONTRACEPTIVE MARKET VOLUMES BY METHOD, 2012 |                          |          |             |         |            |
|-------------------------------------------------------------------------------|--------------------------|----------|-------------|---------|------------|
| COUNTRY                                                                       | CONDOMS<br>MALE & FEMALE | IMPLANTS | INJECTABLES | IUDS    | ORALS      |
| Mauritania                                                                    | 20,000                   | 0        | 13,400      | 0       | 0          |
| Mongolia                                                                      | 6,073,000                | 5,120    | 120,000     | 0       | 652,797    |
| Mozambique                                                                    | 98,478,960               | 30,000   | 2,490,000   | 0       | 6,419,170  |
| Myanmar                                                                       | 9,785,112                | 0        | 1,501,600   | 18,000  | 6,864,858  |
| Nepal                                                                         | 66,400,720               | 88,000   | 237,600     | 104,600 | 0          |
| Nicaragua                                                                     | 4,229,280                | 0        | 450,400     | 11,896  | 822,055    |
| Niger                                                                         | 24,400                   | 3,108    | 200,600     | 10,000  | 740,850    |
| Nigeria                                                                       | 199,399,440              | 328,212  | 14,321,300  | 872,634 | 3,025,137  |
| Pakistan                                                                      | 252,501,000              | 70,768   | 857,600     | 90,700  | 226,701    |
| Papua New Guinea                                                              | 600,000                  | 26,500   | 800,000     | 600     | 6,335      |
| Philippines                                                                   | 2,001,600                | 1,536    | 200,000     | 447,514 | 14,565,234 |
| Rwanda                                                                        | 15,724,568               | 20,060   | 776,400     | 0       | 105,000    |
| Sao Tome and<br>Principe                                                      | 1,682,600                | 6,100    | 15,000      | 5,000   | 125,400    |
| Senegal                                                                       | 14,407,000               | 77,056   | 1,478,400   | 14,000  | 1,002      |
| Sierra Leone                                                                  | 1,122,000                | 0        | 250,000     | 15,990  | 739,073    |
| Solomon Islands                                                               | 0                        | 0        | 0           | 0       | 0          |
| Somalia                                                                       | 0                        | 2,000    | 0           | 0       | 20,000     |
| South Sudan                                                                   | 2,400,000                | 5,004    | 0           | 0       | 0          |
| Sri Lanka                                                                     | 0                        | 74,800   | 250,000     | 1,800   | 2,167,010  |
| Sudan                                                                         | 3,335,968                | 25,040   | 0           | 9,000   | 3,968,200  |
| Tajikistan                                                                    | 1,800,600                | 0        | 41,500      | 140,000 | 432,480    |
| Tanzania                                                                      | 52,549,408               | 351,500  | 4,155,900   | 47,000  | 2,105,540  |
| Timor-Leste                                                                   | 2,592,000                | 5,450    | 0           | 2,000   | 128,571    |
| Togo                                                                          | 43,054,408               | 26,000   | 322,400     | 0       | 27,000     |
| Uganda                                                                        | 89,421,536               | 396,829  | 6,249,200   | 76,896  | 114,400    |
| Uzbekistan                                                                    | 3,635,000                | 0        | 445,000     | 800,000 | 1,121,280  |
| Vietnam                                                                       | 52,546,800               | 23,976   | 900,000     | 800,000 | 138,999    |
| West Bank and Gaza                                                            | 0                        | 0        | 0           | 0       | 0          |
| Western Sahara                                                                | 0                        | 0        | 0           | 0       | 0          |
| Yemen Rep                                                                     | 3,801,888                | 24,000   | 180,000     | 95,000  | 3,443,504  |
| Zambia                                                                        | 39,274,440               | 38,300   | 2,010,800   | 0       | 1,655,200  |
| Zimbabwe                                                                      | 99,270,000               | 113,600  | 634,200     | 6,050   | 14,254,948 |
| Other FP2020<br>Shipment Volumes                                              | 15,667,176               | 721,200  | 12,500      | 84,400  | 51,712,916 |

Sources: [1] Historical Supplier-Reported Shipment Data; [2] RHI Shipment Data, May 2017.

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EXHIBIT A.3: 69 FP2020 COUNTRIES CONTRACEPTIVE MARKET VOLUMES BY METHOD, 2013

| COUNTRY                  | CONDOMS<br>MALE & FEMALE | IMPLANTS | INJECTABLES | IUDS      | ORALS      |
|--------------------------|--------------------------|----------|-------------|-----------|------------|
| Afghanistan              | 23,181,800               | 0        | 1,550,000   | 0         | 17,001     |
| Bangladesh               | 10,111,950               | 0        | 14,200,000  | 0         | 76,298,840 |
| Benin                    | 6,790,800                | 44,200   | 32,400      | 32,000    | 180,000    |
| Bhutan                   | 295,200                  | 0        | 0           | 2,000     | 126,420    |
| Bolivia                  | 3,457,460                | 34,500   | 500,000     | 70,000    | 429,840    |
| Burkina Faso             | 1,411,200                | 257,196  | 215,650     | 28,000    | 565,200    |
| Burundi                  | 640,833                  | 0        | 1,000,000   | 0         | 574,080    |
| Cambodia                 | 2,160,000                | 51,399   | 0           | 2,000     | 4,320,008  |
| Cameroon                 | 0                        | 30,300   | 12,800      | 57,659    | 1,494,720  |
| Central African Republic | 10,449,800               | 6,000    | 183,000     | 1,500     | 1,003,797  |
| Chad                     | 1,337,200                | 44,100   | 628,400     | 13,000    | 2,701,920  |
| Comoros                  | 1,252,800                | 1,600    | 93,300      | 500       | 48,720     |
| Congo Dem Rep            | 81,658,344               | 187,168  | 1,219,300   | 118,000   | 2,384,472  |
| Congo Rep                | 20,000                   | 800      | 273,500     | 500       | 2,457,988  |
| Cote d'Ivoire            | 18,607,800               | 14,000   | 240,000     | 2,500     | 4,584,370  |
| Djibouti                 | 2,288,000                | 0        | 7,600       | 500       | 8,640      |
| Egypt Arab Rep           | 100,800                  | 10,801   | 1,000,164   | 2,340,100 | 0          |
| Eritrea                  | 100,000                  | 600      | 0           | 0         | 50,400     |
| Ethiopia                 | 75,766,296               | 981,740  | 6,159,396   | 160,000   | 15,082,178 |
| Gambia                   | 1,001,800                | 5,000    | 110,000     | 0         | 253,160    |
| Ghana                    | 34,302,000               | 144,348  | 1,025,500   | 10,000    | 451,280    |
| Guinea                   | 9,150,400                | 13,000   | 0           | 4,000     | 0          |
| Guinea-Bissau            | 1,759,600                | 21,400   | 20,600      | 5,500     | 42,840     |
| Haiti                    | 51,940,800               | 1,700    | 1,646,400   | 2,000     | 223,920    |
| Honduras                 | 11,505,600               | 5,056    | 670,000     | 0         | 1,879,920  |
| India                    | 0                        | 0        | 18,260      | 650,800   | 17,671,399 |
| Indonesia                | 0                        | 113,500  | 0           | 727,409   | 0          |
| Iraq                     | 0                        | 0        | 0           | 0         | 3,000,000  |
| Kenya                    | 945,600                  | 635,043  | 12,635,755  | 1,250     | 6,269,302  |
| Korea Dem Rep            | 2,462,400                | 0        | 0           | 15,000    | 96,000     |
| Kyrgyz Republic          | 5,299,200                | 0        | 15,000      | 0         | 570,300    |
| Lao PDR                  | 655,200                  | 0        | 279,200     | 5,000     | 178,962    |
| Lesotho                  | 37,442,000               | 100      | 120,000     | 15,000    | 238,800    |
| Liberia                  | 17,500,000               | 15,200   | 244,800     | 0         | 400,320    |
| Madagascar               | 4,547,768                | 239,980  | 5,733,542   | 0         | 2,376,836  |
| Malawi                   | 74,791,080               | 193,048  | 1,742,327   | 15,610    | 1,590,523  |
| Mali                     | 20,041,008               | 87,700   | 1,197,198   | 0         | 0          |

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| EXHIBIT A.3: 69 FP2020 COUNTRIES CONTRACEPTIVE MARKET VOLUMES BY METHOD, 2013 |                          |          |             |           |            |
|-------------------------------------------------------------------------------|--------------------------|----------|-------------|-----------|------------|
| COUNTRY                                                                       | CONDOMS<br>MALE & FEMALE | IMPLANTS | INJECTABLES | IUDS      | ORALS      |
| Mauritania                                                                    | 12,548,900               | 5,120    | 156,700     | 0         | 726,480    |
| Mongolia                                                                      | 4,633,152                | 17,744   | 80,000      | 35,000    | 435,482    |
| Mozambique                                                                    | 30,528,579               | 127,000  | 3,072,000   | 16,000    | 8,425,200  |
| Myanmar                                                                       | 5,459,032                | 0        | 821,000     | 23,000    | 10,240,559 |
| Nepal                                                                         | 6,370,788                | 10,000   | 655,200     | 30,000    | 0          |
| Nicaragua                                                                     | 4,003,200                | 300      | 339,000     | 7,500     | 1,094,813  |
| Niger                                                                         | 3,394,000                | 90,016   | 503,400     | 0         | 3,183,760  |
| Nigeria                                                                       | 88,696,740               | 344,663  | 2,142,300   | 0         | 2,303,072  |
| Pakistan                                                                      | 315,871,100              | 45,492   | 9,151,200   | 200,400   | 0          |
| Papua New Guinea                                                              | 19,924,800               | 38,790   | 0           | 4,000     | 1,313,583  |
| Philippines                                                                   | 0                        | 85,056   | 1,485,000   | 0         | 9,331,385  |
| Rwanda                                                                        | 14,132,000               | 27,000   | 928,000     | 0         | 1,477,200  |
| Sao Tome and<br>Principe                                                      | 5,000                    | 500      | 0           | 0         | 6,000      |
| Senegal                                                                       | 10,385,200               | 0        | 1,159,000   | 26,000    | 0          |
| Sierra Leone                                                                  | 11,122,800               | 36,600   | 733,000     | 18,000    | 1,652,870  |
| Solomon Islands                                                               | 0                        | 0        | 0           | 500       | 0          |
| Somalia                                                                       | 0                        | 1,000    | 0           | 0         | 148,700    |
| South Sudan                                                                   | 8,601,000                | 10,940   | 0           | 500       | 775,200    |
| Sri Lanka                                                                     | 0                        | 93,000   | 233,500     | 110,000   | 2,068,050  |
| Sudan                                                                         | 2,389,600                | 30,572   | 0           | 0         | 2,456,292  |
| Tajikistan                                                                    | 7,096,200                | 0        | 0           | 105,000   | 0          |
| Tanzania                                                                      | 29,769,000               | 309,621  | 0           | 55,000    | 2,009,270  |
| Timor-Leste                                                                   | 57,600                   | 2,100    | 0           | 0         | 225,863    |
| Togo                                                                          | 11,465,520               | 68,000   | 606,500     | 0         | 108,960    |
| Uganda                                                                        | 185,409,800              | 471,635  | 12,243,775  | 143,000   | 142,000    |
| Uzbekistan                                                                    | 9,553,400                | 0        | 300,000     | 800,000   | 1,367,760  |
| Vietnam                                                                       | 31,968,000               | 56,136   | 870,000     | 1,700,000 | 71,665     |
| West Bank and Gaza                                                            | 3,998,304                | 0        | 0           | 0         | 0          |
| Western Sahara                                                                | 0                        | 0        | 0           | 0         | 0          |
| Yemen Rep                                                                     | 6,082,704                | 56,192   | 1,126,284   | 471,459   | 17,423,472 |
| Zambia                                                                        | 86,409,000               | 75,000   | 1,656,900   | 0         | 2,669,480  |
| Zimbabwe                                                                      | 111,075,000              | 244,180  | 2,460,400   | 3,500     | 24,101,441 |
| Other FP2020<br>Shipment Volumes                                              | 54,175,200               | 678,000  | 251,400     | 84,430    | 72,725,087 |

Sources: [1] Historical Supplier-Reported Shipment Data; [2] RHI Shipment Data, May 2017.

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EXHIBIT A.4: 69 FP2020 COUNTRIES CONTRACEPTIVE MARKET VOLUMES BY METHOD, 2014

| COUNTRY                      | CONDOMS<br>MALE & FEMALE | IMPLANTS | INJECTABLES | IUDS      | ORALS      |
|------------------------------|--------------------------|----------|-------------|-----------|------------|
| Afghanistan                  | 17,329,040               | 3,000    | 109,600     | 5,500     | 424,560    |
| Bangladesh                   | 0                        | 0        | 15,500,000  | 400,000   | 88,795,560 |
| Benin                        | 3,993,400                | 61,300   | 462,400     | 50,500    | 1,011,681  |
| Bhutan                       | 1,440,000                | 0        | 0           | 0         | 156,150    |
| Bolivia                      | 877,250                  | 27,500   | 0           | 0         | 0          |
| Burkina Faso                 | 12,588,200               | 298,500  | 1,476,400   | 12,900    | 2,346,480  |
| Burundi                      | 0                        | 207,900  | 1,500,200   | 6,860     | 470,200    |
| Cambodia                     | 2,995,200                | 30,588   | 520,000     | 55,000    | 4,417,848  |
| Cameroon                     | 10,545,460               | 69,400   | 0           | 2,000     | 639,339    |
| Central African Republic     | 200,000                  | 3,500    | 142,300     | 0         | 155,024    |
| Chad                         | 3,738,240                | 41,100   | 644,800     | 0         | 0          |
| Comoros                      | 0                        | 500      | 0           | 0         | 59,997     |
| Democratic Republic of Congo | 163,406,800              | 50,212   | 267,600     | 14,000    | 964,695    |
| Congo Rep                    | 9,243,540                | 2,108    | 21,400      | 105,000   | 468,597    |
| Cote d'Ivoire                | 21,745,600               | 75,700   | 1,698,200   | 15,500    | 4,770,310  |
| Djibouti                     | 0                        | 0        | 3,800       | 0         | 15,000     |
| Egypt Arab Rep               | 468,000                  | 140,032  | 365,000     | 591,111   | 0          |
| Eritrea                      | 0                        | 500      | 20,000      | 0         | 108,000    |
| Ethiopia                     | 44,350,736               | 495,112  | 12,226,888  | 430,500   | 5,894,456  |
| Gambia                       | 1,440,000                | 9,048    | 160,000     | 0         | 67,860     |
| Ghana                        | 45,105,600               | 120,696  | 6,003,800   | 20,250    | 2,630,160  |
| Guinea                       | 8,955,000                | 20,800   | 45,800      | 0         | 194,400    |
| Guinea-Bissau                | 2,426,400                | 31,000   | 25,000      | 0         | 8,280      |
| Haiti                        | 57,184,080               | 0        | 1,199,200   | 4,000     | 0          |
| Honduras                     | 18,254,736               | 40,000   | 119,400     | 21,500    | 2,860,830  |
| India                        | 0                        | 0        | 10,094      | 2,039,273 | 13,244,150 |
| Indonesia                    | 12,000                   | 0        | 0           | 768,575   | 0          |
| Iraq                         | 5,078,880                | 0        | 0           | 5,039     | 1,513,029  |
| Kenya                        | 36,198,800               | 481,336  | 2,681,620   | 0         | 3,617,640  |
| Korea Dem Rep                | 0                        | 0        | 0           | 0         | 96,000     |
| Kyrgyz Republic              | 0                        | 0        | 40,000      | 0         | 0          |
| Lao PDR                      | 2,793,456                | 3,024    | 382,000     | 0         | 1,141,200  |
| Lesotho                      | 44,934,736               | 600      | 1,000       | 0         | 26,640     |
| Liberia                      | 9,574,000                | 0        | 457,000     | 0         | 352,080    |
| Madagascar                   | 27,001,200               | 77,440   | 8,058,500   | 0         | 1,057,362  |
| Malawi                       | 55,827,800               | 104,324  | 6,531,650   | 0         | 630,006    |
| Mali                         | 32,271,400               | 100,600  | 1,190,600   | 21,000    | 2,673,306  |



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EXHIBIT A.4: 69 FP2020 COUNTRIES CONTRACEPTIVE MARKET VOLUMES BY METHOD, 2014

| COUNTRY                          | CONDOMS<br>MALE & FEMALE | IMPLANTS  | INJECTABLES | IUDS      | ORALS       |
|----------------------------------|--------------------------|-----------|-------------|-----------|-------------|
| Mauritania                       | 43,000                   | 1,200     | 35,000      | 0         | 83,520      |
| Mongolia                         | 882,720                  | 0         | 0           | 25,000    | 158,420     |
| Mozambique                       | 44,553,600               | 22,000    | 6,868,050   | 0         | 129,600     |
| Myanmar                          | 14,708,640               | 5,000     | 6,087,300   | 20,000    | 13,108,816  |
| Nepal                            | 13,462,400               | 44,700    | 3,795,800   | 35,149    | 2,558,000   |
| Nicaragua                        | 0                        | 0         | 95,150      | 0         | 0           |
| Niger                            | 504,000                  | 171,024   | 762,200     | 3,500     | 1,918,800   |
| Nigeria                          | 68,370,144               | 323,168   | 7,747,600   | 141,100   | 920,802     |
| Pakistan                         | 253,485,000              | 34,080    | 10,367,600  | 2,163,550 | 0           |
| Papua New Guinea                 | 11,238,800               | 42,000    | 1,322,400   | 10,000    | 1,125,519   |
| Philippines                      | 0                        | 149,023   | 2,000       | 0         | 18,456,458  |
| Rwanda                           | 5,403,000                | 32,816    | 1,727,200   | 0         | 60,480      |
| Sao Tome and<br>Principe         | 7,160                    | 0         | 0           | 0         | 39,600      |
| Senegal                          | 30,213,112               | 33,600    | 1,149,600   | 42,000    | 691,000     |
| Sierra Leone                     | 6,756,880                | 0         | 414,600     | 0         | 549,360     |
| Solomon Islands                  | 7,000                    | 0         | 0           | 0         | 34,560      |
| Somalia                          | 28,800                   | 28,000    | 60,000      | 8,500     | 68,880      |
| South Sudan                      | 5,205,600                | 15,000    | 0           | 0         | 24,999      |
| Sri Lanka                        | 0                        | 63,000    | 406,800     | 0         | 6,619,680   |
| Sudan                            | 2,628,000                | 29,440    | 6,600       | 0         | 1,589,396   |
| Tajikistan                       | 7,438,096                | 0         | 43,600      | 40,000    | 193,440     |
| Tanzania                         | 31,370,600               | 458,644   | 1,492,400   | 75,000    | 2,421,591   |
| Timor-Leste                      | 0                        | 10,500    | 181,400     | 0         | 205,359     |
| Togo                             | 7,278,801                | 48,200    | 63,000      | 0         | 69,104      |
| Uganda                           | 134,701,296              | 479,202   | 6,172,050   | 0         | 533,130     |
| Uzbekistan                       | 4,809,600                | 0         | 0           | 1,457,500 | 0           |
| Vietnam                          | 0                        | 43,322    | 0           | 0         | 0           |
| West Bank and Gaza               | 0                        | 0         | 0           | 0         | 0           |
| Western Sahara                   | 0                        | 0         | 0           | 0         | 0           |
| Yemen Rep                        | 2,367,360                | 25,088    | 306,500     | 48,000    | 2,338,860   |
| Zambia                           | 54,777,800               | 136,600   | 2,532,100   | 3,500     | 1,576,800   |
| Zimbabwe                         | 129,833,000              | 149,100   | 0           | 3,000     | 14,795,070  |
| Other FP2020<br>Shipment Volumes | 47,544,044               | 1,405,100 | 390,400     | 171,201   | 102,973,716 |

Sources: [1] Historical Supplier-Reported Shipment Data; [2] RHI Shipment Data, May 2017.

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EXHIBIT A.5: 69 FP2020 COUNTRIES CONTRACEPTIVE MARKET VOLUMES BY METHOD, 2015

| COUNTRY                      | CONDOMS<br>MALE & FEMALE | IMPLANTS  | INJECTABLES | IUDS      | ORALS      |
|------------------------------|--------------------------|-----------|-------------|-----------|------------|
| Afghanistan                  | 4,728,000                | 4,500     | 0           | 30,000    | 300,000    |
| Bangladesh                   | 0                        | 50,000    | 15,100,000  | 0         | 24,000,000 |
| Benin                        | 12,169,800               | 222,536   | 125,500     | 66,500    | 525,600    |
| Bhutan                       | 1,936,800                | 0         | 111,000     | 0         | 129,999    |
| Bolivia                      | 0                        | 3,500     | 0           | 0         | 0          |
| Burkina Faso                 | 19,747,510               | 244,044   | 564,000     | 35,500    | 3,559,057  |
| Burundi                      | 5,760,000                | 134,500   | 1,639,267   | 0         | 594,600    |
| Cambodia                     | 5,730,480                | 11,000    | 200,000     | 30,000    | 9,551,557  |
| Cameroon                     | 26,245,443               | 125,052   | 10,000      | 46,550    | 48,465     |
| Central African Republic     | 0                        | 500       | 37,900      | 0         | 23,841     |
| Chad                         | 100,000                  | 7,600     | 0           | 0         | 0          |
| Comoros                      | 1,303,200                | 1,008     | 78,400      | 0         | 35,001     |
| Democratic Republic of Congo | 65,606,368               | 308,230   | 1,189,200   | 0         | 3,124,218  |
| Congo Rep                    | 7,104,840                | 11,000    | 622,360     | 0         | 0          |
| Cote d'Ivoire                | 100,000                  | 15,664    | 212,000     | 0         | 5,224,561  |
| Djibouti                     | 0                        | 500       | 296,667     | 0         | 93,327     |
| Egypt Arab Rep               | 0                        | 0         | 0           | 258,200   | 0          |
| Eritrea                      | 0                        | 0         | 120,000     | 0         | 108,000    |
| Ethiopia                     | 31,052,091               | 1,180,607 | 2,000,000   | 650,000   | 8,478,983  |
| Gambia                       | 2,900                    | 30,048    | 265,000     | 0         | 156,240    |
| Ghana                        | 13,995,000               | 403,236   | 1,992,000   | 0         | 1,993,464  |
| Guinea                       | 10,080,000               | 32,500    | 907,448     | 0         | 484,880    |
| Guinea-Bissau                | 3,384,720                | 59,400    | 27,500      | 0         | 78,000     |
| Haiti                        | 60,014,400               | 9,300     | 421,400     | 0         | 228,571    |
| Honduras                     | 10,000,800               | 93,656    | 1,725,800   | 62,000    | 3,505,905  |
| India                        | 0                        | 0         | 795,252     | 1,273,927 | 325,000    |
| Indonesia                    | 20,000                   | 25,086    | 0           | 171,000   | 0          |
| Iraq                         | 0                        | 0         | 0           | 0         | 0          |
| Kenya                        | 45,779,200               | 905,900   | 2,231,000   | 70,000    | 3,142,535  |
| Korea Dem Rep                | 0                        | 0         | 0           | 0         | 0          |
| Kyrgyz Republic              | 1,527,264                | 0         | 80,000      | 0         | 0          |
| Lao PDR                      | 10,875,960               | 20,000    | 333,000     | 0         | 1,530,720  |
| Lesotho                      | 21,016,000               | 1,500     | 81,800      | 0         | 124,369    |
| Liberia                      | 9,009,780                | 44,600    | 846,800     | 0         | 459,270    |
| Madagascar                   | 1,500,000                | 72,722    | 9,349,250   | 35,996    | 595,605    |
| Malawi                       | 68,274,192               | 278,786   | 6,099,200   | 0         | 552,795    |
| Mali                         | 39,764,195               | 195,805   | 432,840     | 18,393    | 948,953    |

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EXHIBIT A.5: 69 FP2020 COUNTRIES CONTRACEPTIVE MARKET VOLUMES BY METHOD, 2015

| COUNTRY                          | CONDOMS<br>MALE & FEMALE | IMPLANTS  | INJECTABLES | IUDS      | ORALS       |
|----------------------------------|--------------------------|-----------|-------------|-----------|-------------|
| Mauritania                       | 0                        | 86,264    | 41,200      | 0         | 140,640     |
| Mongolia                         | 5,752,800                | 0         | 90,000      | 0         | 242,382     |
| Mozambique                       | 41,712,000               | 95,000    | 3,025,500   | 0         | 0           |
| Myanmar                          | 42,282,008               | 108,156   | 7,231,700   | 900       | 1,134,860   |
| Nepal                            | 8,304,000                | 127,500   | 1,067,000   | 0         | 2,304,779   |
| Nicaragua                        | 0                        | 2,000     | 65,050      | 3,000     | 188,640     |
| Niger                            | 0                        | 12,700    | 820,800     | 10,425    | 2,495,670   |
| Nigeria                          | 97,478,368               | 379,591   | 8,132,250   | 75,000    | 2,725,901   |
| Pakistan                         | 290,853,000              | 210,484   | 0           | 3,024,116 | 0           |
| Papua New Guinea                 | 3,480                    | 100,800   | 1,327,200   | 0         | 16,399      |
| Philippines                      | 0                        | 731,244   | 0           | 82,336    | 4,135,001   |
| Rwanda                           | 18,626,900               | 28,752    | 727,667     | 5,768     | 334,166     |
| Sao Tome and<br>Principe         | 0                        | 0         | 9,400       | 0         | 66,329      |
| Senegal                          | 18,858,530               | 65,384    | 760,000     | 0         | 1,471,680   |
| Sierra Leone                     | 7,926,120                | 68,500    | 726,800     | 0         | 1,214,340   |
| Solomon Islands                  | 0                        | 0         | 15,000      | 0         | 0           |
| Somalia                          | 151,200                  | 52,016    | 158,900     | 0         | 262,080     |
| South Sudan                      | 9,036,000                | 53,100    | 89,350      | 0         | 147,902     |
| Sri Lanka                        | 0                        | 56,000    | 574,000     | 130,000   | 1,589,760   |
| Sudan                            | 3,000                    | 30,568    | 474,200     | 0         | 3,851,868   |
| Tajikistan                       | 24,812,640               | 3,500     | 90,000      | 0         | 270,000     |
| Tanzania                         | 846,800                  | 1,241,695 | 9,935,400   | 194,124   | 150,195     |
| Timor-Leste                      | 0                        | 12,000    | 240,000     | 2,000     | 79,902      |
| Togo                             | 4,810,000                | 59,672    | 495,400     | 0         | 261,468     |
| Uganda                           | 35,316,096               | 258,060   | 8,235,050   | 48,300    | 258,123     |
| Uzbekistan                       | 0                        | 0         | 701,600     | 2,408,900 | 1,989,949   |
| Vietnam                          | 0                        | 0         | 0           | 1,005,000 | 0           |
| West Bank and Gaza               | 0                        | 0         | 0           | 0         | 0           |
| Western Sahara                   | 0                        | 0         | 0           | 0         | 0           |
| Yemen Rep                        | 5,256,000                | 25,536    | 14,300      | 75,000    | 8,386,917   |
| Zambia                           | 66,167,400               | 245,900   | 3,399,400   | 13,000    | 3,770,375   |
| Zimbabwe                         | 141,429,280              | 98,500    | 889,100     | 1,900     | 9,400,083   |
| Other FP2020<br>Shipment Volumes | 85,564,584               | 1,564,900 | 352,600     | 113,550   | 197,242,875 |

Sources: [1] Historical Supplier-Reported Shipment Data; [2] RHI Shipment Data, May 2017.

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EXHIBIT A.6: 69 FP2020 COUNTRIES CONTRACEPTIVE MARKET VOLUMES BY METHOD, 2016

| COUNTRY                      | CONDOMS<br>MALE & FEMALE | IMPLANTS  | INJECTABLES | IUDS      | ORALS      |
|------------------------------|--------------------------|-----------|-------------|-----------|------------|
| Afghanistan                  | 1,010,880                | 14,200    | 19,000      | 20,000    | 211,440    |
| Bangladesh                   | 0                        | 150,000   | 8,200,000   | 0         | 0          |
| Benin                        | 3,708,000                | 277,028   | 70,000      | 27,000    | 5,040      |
| Bhutan                       | 0                        | 0         | 237,000     | 0         | 0          |
| Bolivia                      | 50,400                   | 67,800    | 3,000       | 0         | 5,760      |
| Burkina Faso                 | 12,911,000               | 427,800   | 1,123,500   | 0         | 1,600,971  |
| Burundi                      | 14,555,999               | 1,600     | 0           | 0         | 70,240     |
| Cambodia                     | 5,719,248                | 58,960    | 1,000,000   | 30,000    | 10,539,359 |
| Cameroon                     | 18,205,048               | 82,488    | 482,975     | 0         | 500,000    |
| Central African Republic     | 3,628,800                | 6,200     | 147,600     | 500       | 262,296    |
| Chad                         | 0                        | 41,024    | 15,600      | 0         | 0          |
| Comoros                      | 1,442,448                | 1,972     | 113,000     | 0         | 77,040     |
| Democratic Republic of Congo | 12,148,999               | 688,089   | 0           | 10,000    | 1,026,756  |
| Congo Rep                    | 3,600,000                | 1,008     | 6,720       | 29,650    | 2,880      |
| Cote d'Ivoire                | 16,569,000               | 97,256    | 3,023,395   | 10,000    | 997,500    |
| Djibouti                     | 0                        | 0         | 663,000     | 0         | 44,280     |
| Egypt Arab Rep               | 0                        | 140,000   | 0           | 2,680,434 | 0          |
| Eritrea                      | 0                        | 0         | 100,000     | 0         | 126,640    |
| Ethiopia                     | 36,840,000               | 1,022,105 | 7,570,056   | 751,144   | 6,625,921  |
| Gambia                       | 2,880,000                | 20,016    | 313,000     | 0         | 565,200    |
| Ghana                        | 32,898,960               | 141,432   | 3,889,100   | 15,410    | 2,751,660  |
| Guinea                       | 7,488,000                | 77,000    | 90,000      | 0         | 512,644    |
| Guinea-Bissau                | 0                        | 50,000    | 13,000      | 0         | 10,080     |
| Haiti                        | 38,349,000               | 5,300     | 0           | 1,500     | 30,240     |
| Honduras                     | 25,005,600               | 0         | 1,977,000   | 0         | 1,385,280  |
| India                        | 5,000                    | 0         | 23,984      | 865,062   | 6,137,520  |
| Indonesia                    | 5,000                    | 350,000   | 0           | 120,074   | 0          |
| Iraq                         | 0                        | 1,000     | 0           | 0         | 0          |
| Kenya                        | 54,090,024               | 742,864   | 95,000      | 37,500    | 3,403,080  |
| Korea Dem Rep                | 0                        | 0         | 905,200     | 0         | 0          |
| Kyrgyz Republic              | 2,440,080                | 0         | 0           | 0         | 0          |
| Lao PDR                      | 0                        | 53,200    | 850,600     | 0         | 1,405,440  |
| Lesotho                      | 11,262,000               | 23,452    | 260,400     | 0         | 218,160    |
| Liberia                      | 12,461,280               | 44,600    | 0           | 0         | 251,040    |
| Madagascar                   | 4,500,000                | 303,932   | 1,440,600   | 0         | 849,600    |
| Malawi                       | 12,520,000               | 33,700    | 2,475,200   | 0         | 0          |
| Mali                         | 12,604,704               | 27,072    | 25,000      | 17,300    | 20,160     |

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| EXHIBIT A.6: 69 FP2020 COUNTRIES CONTRACEPTIVE MARKET VOLUMES BY METHOD, 2016 |                          |           |             |           |             |
|-------------------------------------------------------------------------------|--------------------------|-----------|-------------|-----------|-------------|
| COUNTRY                                                                       | CONDOMS<br>MALE & FEMALE | IMPLANTS  | INJECTABLES | IUDS      | ORALS       |
| Mauritania                                                                    | 3,110,400                | 2,500     | 39,000      | 0         | 164,160     |
| Mongolia                                                                      | 6,796,800                | 3,100     | 30,000      | 0         | 405,108     |
| Mozambique                                                                    | 59,034,000               | 0         | 90,000      | 13,000    | 205,920     |
| Myanmar                                                                       | 16,169,472               | 147,348   | 1,800       | 0         | 7,560,366   |
| Nepal                                                                         | 32,161,800               | 98,400    | 25,400      | 31,950    | 228,066     |
| Nicaragua                                                                     | 1,500,000                | 4,008     | 0           | 15,000    | 0           |
| Niger                                                                         | 0                        | 50,400    | 1,317,700   | 0         | 3,141,960   |
| Nigeria                                                                       | 149,734,200              | 771,763   | 1,278,600   | 90,030    | 3,320,703   |
| Pakistan                                                                      | 109,244,976              | 800       | 0           | 1,872,716 | 15,120      |
| Papua New Guinea                                                              | 1,994,400                | 103,000   | 22,600      | 0         | 11,520      |
| Philippines                                                                   | 0                        | 0         | 0           | 1,070,737 | 0           |
| Rwanda                                                                        | 16,056,000               | 65,294    | 1,734,900   | 0         | 2,439,900   |
| Sao Tome and<br>Principe                                                      | 0                        | 0         | 0           | 0         | 63,360      |
| Senegal                                                                       | 5,094,000                | 179,864   | 10,000      | 32,675    | 860,949     |
| Sierra Leone                                                                  | 1,080,000                | 73,000    | 280,200     | 5,500     | 955,860     |
| Solomon Islands                                                               | 0                        | 0         | 0           | 0         | 0           |
| Somalia                                                                       | 0                        | 0         | 1,950       | 0         | 19,000      |
| South Sudan                                                                   | 9,681,120                | 30,000    | 150,000     | 0         | 172,080     |
| Sri Lanka                                                                     | 0                        | 50,500    | 650,000     | 100,000   | 6,049,600   |
| Sudan                                                                         | 7,216,992                | 49,104    | 29,800      | 3,500     | 338,345     |
| Tajikistan                                                                    | 17,392,200               | 0         | 93,000      | 25,000    | 415,440     |
| Tanzania                                                                      | 428,800                  | 986,112   | 4,741,200   | 486,000   | 5,621,360   |
| Timor-Leste                                                                   | 0                        | 10,500    | 0           | 0         | 0           |
| Togo                                                                          | 14,036,128               | 46,656    | 315,800     | 0         | 27,360      |
| Uganda                                                                        | 19,200,000               | 234,524   | 1,184,250   | 45,200    | 5,740,520   |
| Uzbekistan                                                                    | 6,228,720                | 0         | 848,400     | 432,800   | 0           |
| Vietnam                                                                       | 0                        | 0         | 0           | 1,096,080 | 0           |
| West Bank and Gaza                                                            | 0                        | 0         | 800         | 0         | 0           |
| Western Sahara                                                                | 0                        | 0         | 0           | 0         | 0           |
| Yemen Rep                                                                     | 8,102,880                | 0         | 157,000     | 75,000    | 1,141,120   |
| Zambia                                                                        | 32,762,600               | 142,000   | 443,000     | 0         | 0           |
| Zimbabwe                                                                      | 106,975,000              | 140,656   | 661,800     | 1,800     | 19,521,550  |
| Other FP2020<br>Shipment Volumes                                              | 20,389,000               | 1,016,700 | 392,800     | 198,850   | 216,000,206 |

Sources: [1] Historical Supplier-Reported Shipment Data; [2] RHI Shipment Data, May 2017.

## APPENDIX B — DATA SOURCES

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Prior to the development of market analyses, CHAI reviewed various data sources from partner organizations that provide family planning market data at the global level. CHAI assessed these databases based on available metrics, coverage of countries, frequency of updates, and ease of access to identify the most appropriate sources for sustainable analyses, with the ability to be updated as new data became available. The following provides an overview of the data sources CHAI relied upon for market analyses:

### **FP2020 Global Markets Visibility Project**

In early 2014, CHAI, in partnership with RHSC and the FP2020 Market Dynamics Working Group, launched the Global Markets Visibility Project to help various donors, suppliers, and partners improve their understanding of the current market size and trends for key contraceptive markets. CHAI signed MOUs with contraceptive manufacturers and received historical shipment data by product and country for each of the 69 FP2020 focus countries. CHAI has partnered with Concept Foundation to collect and aggregate shipment data from participating members of the RHSC Generic Manufacturers for Reproductive Health Caucus (GEMs). To date, the Global Markets Visibility Project has collected historical shipment data that covers institutional sales (USAID, UNFPA, MSI, etc.) and MOH tender volumes from 14 manufacturers across five family planning product categories.

### **Reproductive Health Interchange (RHI)<sup>43</sup>**

Hosted by UNFPA, RHI collects data on past and upcoming contraceptive volume shipments for over 140 countries from the central procurement offices of major contraceptive donors and procurers. This database is updated at variable times that depend on the frequency of data submissions from the data provider. RHI reflects all of UNFPA's and USAID's contraceptive purchases, MSI's and IPPF's central procurements, and a few other procuring organizations' purchases. For this report, the full RHI data was downloaded in May 2017 and supplemented with data from USAID/ PSM systems to include the USAID-funded shipments not currently captured in RHI due to data integration issues.

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43. RHI, available at <https://www.unfpaprocedurement.org/rhi-home>.

## APPENDIX C — ESTIMATING THE TOTAL FP2020 PUBLIC SECTOR MARKET SIZE

The FP2020 public sector market size was constructed using the best available data sources: historical supplier-reported shipment data and RHI shipment data.

### Participating Suppliers' Representation of the RHI Market

Within the RHI shipment data, the suppliers participating in the Global Markets Visibility Project held 96 percent or more of shipment volumes<sup>44</sup> in every category with the exception of IUDs, where suppliers held 51 percent of the volumes (Exhibit C.1).

The historical supplier-reported shipment data captured a more comprehensive view of the FP2020 public sector market for female condoms, implants, injectables, IUDs, and orals relative to RHI, and thus served as the primary data source for these product markets. Because

CHAI has not yet received male condom data from any suppliers, RHI data was relied upon for the male condom volumes. The data is quantified by the units of measurement outlined in Exhibit C.2.

The following section describes the data source and market size estimation in more detail.

### Historical Supplier-Reported Data

To date, the Global Markets Visibility Project has collected historical supplier-reported shipment data from 14 manufacturers – Bayer, Cipla, CR Zizhu, Cupid, Helm AG, Mylan, Merck/MSD, Pfizer, Pregna, PT Tunggai, Shanghai Dahua, SMB, Techno Drugs, and Veru Healthcare<sup>45</sup>. Collectively, the total volumes cover institutional sales (USAID, UNFPA, MSI, etc.) and MOH tenders across five family planning product categories.<sup>46</sup>

**EXHIBIT C.1: GLOBAL MARKETS VISIBILITY PROJECT PARTICIPATING SUPPLIER VOLUMES WITHIN RHI BY METHOD FOR THE FP2020 PUBLIC SECTOR MARKET**

| METHOD           | PARTICIPATING SUPPLIER VOLUMES IN RHI 2011 – 2016 | ALL SUPPLIERS VOLUMES IN RHI 2011 – 2016 | % OF TOTAL METHOD VOLUMES |
|------------------|---------------------------------------------------|------------------------------------------|---------------------------|
| Condoms - Female | 129 M                                             | 133 M                                    | 97%                       |
| Implants         | 31 M                                              | 32 M                                     | 98%                       |
| Injectables      | 350 M                                             | 363 M                                    | 96%                       |
| IUDs             | 13 M                                              | 26 M                                     | 51%                       |
| Orals            | 652 M                                             | 672 M                                    | 97%                       |
| <b>Total</b>     | <b>1.17B</b>                                      | <b>1.23 B</b>                            | <b>96%</b>                |

**EXHIBIT C.2: UNIT OF MEASUREMENT**

| METHOD                 | UNIT OF MEASURE |
|------------------------|-----------------|
| Condoms - Female       | Piece           |
| Condoms - Male         | Piece           |
| Implants               | Set             |
| Injectables            | Vial            |
| IUDs                   | Piece           |
| Orals - Combined       | Cycle           |
| Orals - Progestin Only | Cycle           |
| Orals - Emergency      | Doses           |

**EXHIBIT C.3: GLOBAL MARKETS VISIBILITY PROJECT PARTICIPANTS AND PRODUCTS**

| MANUFACTURER    | CONDOMS - FEMALE | IMPLANTS | INJECTABLES | IUDS | ORALS |
|-----------------|------------------|----------|-------------|------|-------|
| Bayer           |                  | •        | •           |      | •     |
| Cipla           |                  |          |             |      | •     |
| CR Zizhu        |                  |          |             |      | •     |
| Cupid           | •                |          |             |      |       |
| Helm AG         | •                |          | •           |      |       |
| Mylan           |                  |          | •           | •    | •     |
| Merck/MSD       |                  | •        |             |      | •     |
| Pfizer          |                  |          | •           |      |       |
| Pregna          |                  |          |             | •    |       |
| PT Tunggai      |                  |          | •           |      | •     |
| Shanghai Dahua  |                  | •        |             |      |       |
| SMB             |                  |          |             | •    |       |
| Techno Drugs    |                  |          | •           |      | •     |
| Veru Healthcare | •                |          |             |      |       |

Source: [1] Historical Supplier-Reported Shipment Data.

44. Shipment volumes were calculated as cumulative from 2011 to 2016.

45. Female Health Company was acquired by Veru Healthcare in 2016.

46. Total shipment of oral contraceptives includes combined, progestin-only, and emergency oral contraceptives.

## APPENDIX C — ESTIMATING THE TOTAL FP2020 PUBLIC SECTOR MARKET SIZE

### Aggregating across female condoms, implants, injectables, IUDs, and orals in the 69 FP2020 countries and methods, suppliers have shipped an average of 378 million units of family planning commodities annually from 2011 to 2016.<sup>47</sup>

It is important to note that there were several shipments to procurer (USAID, UNFPA, SMOs) warehouses in non-FP2020 countries, such as Belgium, Denmark, France, Germany, Netherlands, Norway, Sweden, Switzerland, UK, and US. Although these volumes were shipped to non-FP2020 countries, the end shipment destination of these volumes would likely be the 69 FP2020 countries. As a result, these non-FP2020 country volumes were included in the total shipments to 69 FP2020 countries after it was confirmed that the specific non-FP2020 country volumes were associated with institutional purchases.

CHAI analyzed and assessed the aggregated historical supplier-reported shipment data to confirm the coverage across various FP2020 product markets was greater relative to RHI shipment data for the 69 FP2020 countries. The aim of collecting historical volumes of all institutional purchases and MOH tenders directly from suppliers was to address data gaps observed in RHI shipment data which only captures a subset of procurers who choose to submit historical procurement data. Further, although some countries report national procurements, most national procurements are not reported into the RHI database. Compared to RHI, the total historical supplier-reported shipment volumes to 69 FP2020 countries and procurer warehouses is consistently greater than RHI volumes across four family planning methods: implants, injectables, IUDs, and orals.<sup>48</sup> Thus, for these product markets, the supplier-reported shipment data captures a more comprehensive view of the family planning market in the 69 FP2020 countries. For female condoms, the RHI volumes are actually greater than supplier shipment data in 2013 and 2014; however, the difference is relatively small in 2014.

EXHIBIT C.4: SUPPLIER-REPORTED SHIPMENT VOLUMES TO FP2020 COUNTRIES BY METHOD, 2011–2016

| METHOD                            | 2011           | 2012           | 2013           | 2014           | 2015           | 2016           |
|-----------------------------------|----------------|----------------|----------------|----------------|----------------|----------------|
| Condoms – Female                  | 20.0 M         | 18.9 M         | 17.4 M         | 25.1 M         | 25.3 M         | 21.7 M         |
| Implants                          | 3.1 M          | 5.8 M          | 6.1 M          | 6.2 M          | 10.2 M         | 9.2 M          |
| Injectables                       | 73.3 M         | 109.1 M        | 93.7 M         | 113.9 M        | 97.6 M         | 49.6 M         |
| IUDs                              | 10.3 M         | 9.1 M          | 8.1 M          | 8.8 M          | 9.9 M          | 10.2 M         |
| Orals - Combined & Progestin Only | 311.0 M        | 319.5 M        | 283.4 M        | 267.5 M        | 172.6 M        | 113.7 M        |
| Orals - Emergency                 | 3.0 M          | 10.9 M         | 4.9 M          | 4.9 M          | 6.5 M          | 6.1 M          |
| <b>Total</b>                      | <b>420.7 M</b> | <b>473.1 M</b> | <b>413.6 M</b> | <b>426.4 M</b> | <b>322.1 M</b> | <b>210.5 M</b> |

Source: [1] Historical Supplier-Reported Shipment Data.

47. Negative volumes and volumes with no associated shipment destination have been excluded.

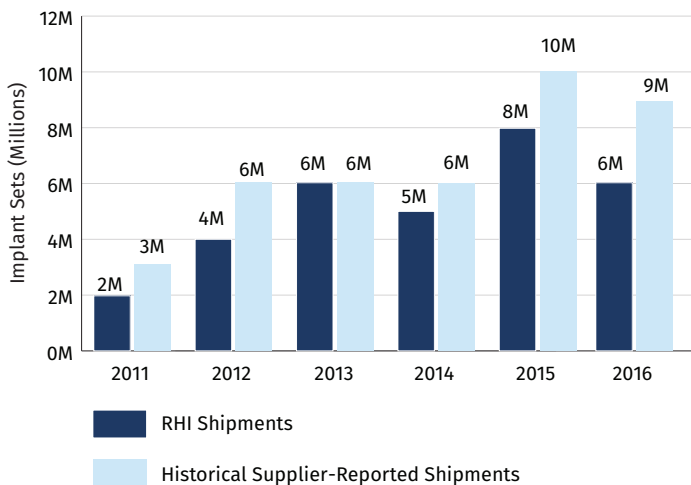
48. Similar to the historical supplier-reported shipment totals, RHI volumes to Belgium, Denmark, Germany, France, Netherlands, Norway, Sweden, Switzerland, UK, and the US are included in the total. For the UK, shipments to IPPF or MSI warehouses are included in total

volumes. For Belgium, Denmark, Germany, France, Netherlands, Norway, Sweden, Switzerland, UK, and the US, shipments funded or procured by USAID and UNFPA are included in total volumes. We assume the end shipments destination of these volumes are likely to the 69 FP2020 countries and thus, include the volumes in the total FP2020 market estimate.

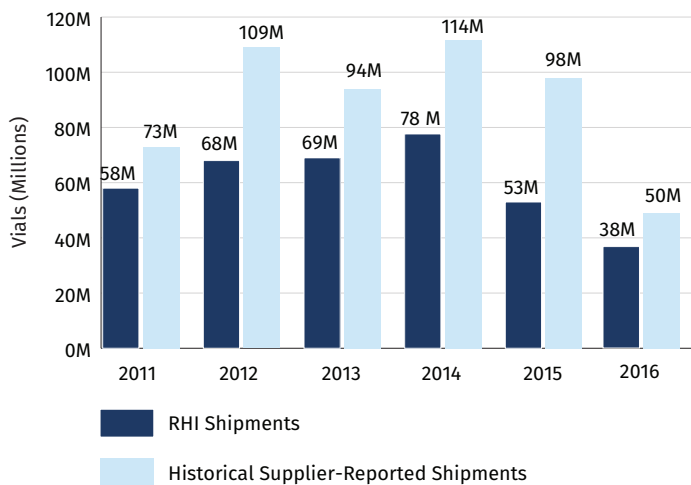


**EXHIBIT C.5: RHI VS. SUPPLIER-REPORTED SHIPMENT VOLUMES TO FP2020 COUNTRIES BY METHOD, 2011-2016**

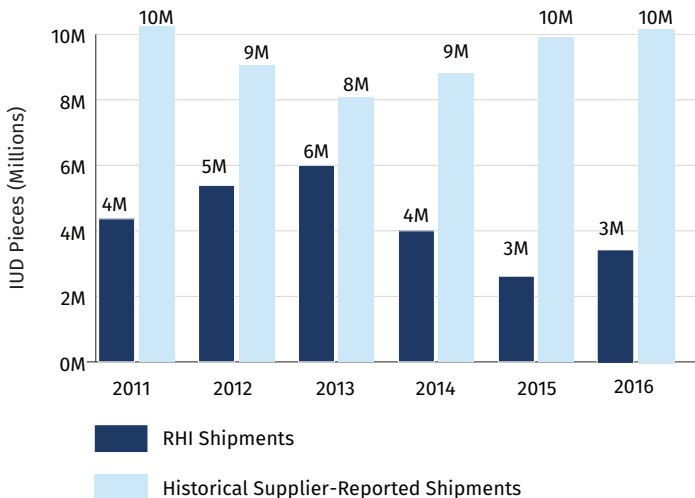
**IMPLANTS**



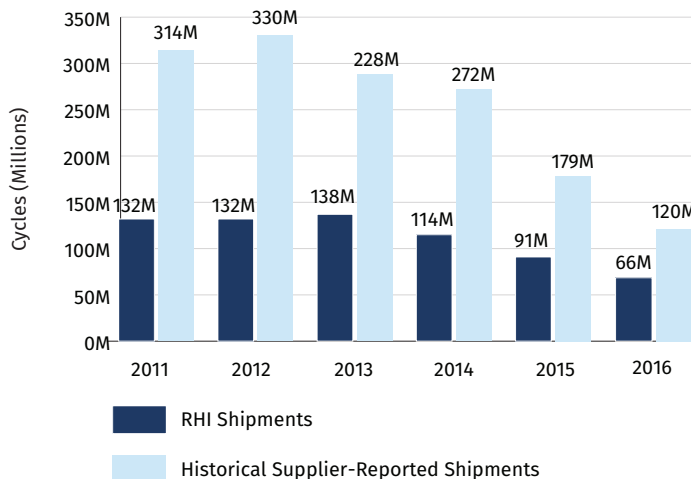
**INJECTABLES**



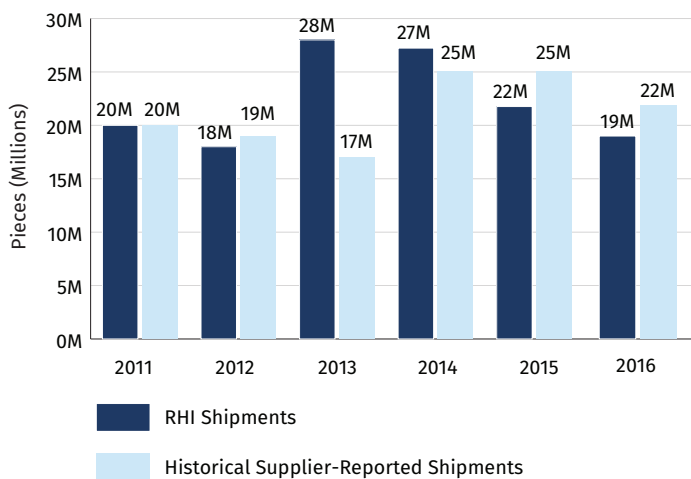
**IUDS**



**ORALS**



**CONDOMS - FEMALE**



Sources: [1] Historical Supplier Shipment Data; [2] RHI Shipment Data, May 2017.

## APPENDIX C — ESTIMATING THE TOTAL FP2020 PUBLIC SECTOR MARKET SIZE

### Male Condom Market

Because CHAI has not yet received data from male condom suppliers, historical RHI shipment data for male condoms was used to capture a more comprehensive view of the family planning market for the 69 FP2020 countries. We used RHI shipment volume data from 2011 to 2016 and included all male condom shipment volumes to 69 FP2020 countries as well as volumes associated with procurer warehouses in non-FP2020 focus countries.<sup>49</sup> The male condom market reflected by the RHI data includes 21 manufacturers and 18 funding sources.

The historical supplier-reported volumes for female condoms, implants, injectables, IUDs, and orals, together with RHI shipment volumes for male condoms, represent the estimated FP2020 public sector market from 2011 to 2016.

EXHIBIT C.6: RHI MALE CONDOM SHIPMENT VOLUMES, 2011–2016

| METHOD         | 2011   | 2012   | 2013   | 2014   | 2015   | 2016   |
|----------------|--------|--------|--------|--------|--------|--------|
| Condoms – Male | 1.62 B | 1.84 B | 1.57 B | 1.49 B | 1.36 B | 0.97 B |

EXHIBIT C.7: 69 FP2020 CONTRACEPTIVE MARKET VOLUMES BY METHOD, 2011–2016

| METHOD                            | 2011          | 2012          | 2013          | 2014          | 2015          | 2016          |
|-----------------------------------|---------------|---------------|---------------|---------------|---------------|---------------|
| Condoms – Female                  | 20.0 M        | 18.9 M        | 17.4 M        | 25.1 M        | 25.3 M        | 21.7 M        |
| Condoms – Male (RHI)              | 1.62 B        | 1.84 B        | 1.57 B        | 1.49 B        | 1.36 B        | 0.97 B        |
| Implants                          | 3.1 M         | 5.8 M         | 6.1 M         | 6.2 M         | 10.2 M        | 9.2 M         |
| Injectables                       | 73.3 M        | 109.1 M       | 93.7 M        | 113.9 M       | 97.6 M        | 49.6 M        |
| IUDs                              | 10.3 M        | 9.1 M         | 8.1 M         | 8.8 M         | 9.9 M         | 10.2 M        |
| Orals – Combined & Progestin Only | 311.0 M       | 319.5 M       | 283.4 M       | 267.5 M       | 172.6 M       | 113.7 M       |
| Orals – Emergency                 | 3.0 M         | 10.9 M        | 4.9 M         | 4.9 M         | 6.5 M         | 6.1 M         |
| <b>Total</b>                      | <b>2.04 B</b> | <b>2.32 B</b> | <b>1.98 B</b> | <b>1.92 B</b> | <b>1.68 B</b> | <b>1.18 B</b> |

Source: [Exhibit C.6] RHI Shipment Data, May 2017. Source: [Exhibit C.7] Historical Supplier-Reported Shipment Data; RHI Shipment Data, May 2017.

49. Total yearly volumes are based on the year that the product was shipped.

## APPENDIX C — ESTIMATING THE TOTAL FP2020 PUBLIC SECTOR MARKET SIZE

### Total FP2020 Public Sector Market In Terms of Total FP2020 Public Sector Market In Terms of CYPs

CHAI translated shipment volumes to CYPs by dividing shipment volumes by each method's corresponding couple-years of protection (CYP) factor.

CHAI divided all shipment volumes by the corresponding CYP factor published by USAID. CYP is the estimated protection provided by contraceptive methods during a one-year period based upon the volume of all methods sold or distributed for free to clients during that period of time.<sup>50</sup> Because various methods may have different CYPs associated with different sub-types of that method (e.g. there are different CYP factors for three-, four-, and five-year implants), the corresponding CYP of the method sub-type is used. The following exhibit shows the conversion factors used to translate volumes to CYPs.

#### EXHIBIT C.8: VOLUMES TO CYPs SHIPPED CONVERSION FACTORS, 2011–2016

| METHOD                 | 1/CYP  |
|------------------------|--------|
| Condoms - Female       | 120.00 |
| Condoms - Male         | 120.00 |
| Implants - 3 Year      | 0.40   |
| Implants - 4 Year      | 0.31   |
| Implants - 5 Year      | 0.26   |
| Injectables - 1 month  | 0.08   |
| Injectables - 2 month  | 0.17   |
| Injectables - 3 month  | 0.25   |
| IUDs                   | 0.22   |
| Orals - Combined       | 15.00  |
| Orals - Progestin Only | 15.00  |
| Orals - Emergency      | 20.00  |

Source: [1] USAID, "Couple-Years of Protection (CYP)," May 2017.

50. USAID, "Couple-Years of Protection (CYP)", April 2014, available at <http://www.usaid.gov/what-we-do/global-health/family-planning/couple-years-protection-cyp>.

## APPENDIX C — ESTIMATING THE TOTAL FP2020 PUBLIC SECTOR MARKET SIZE

### Total FP2020 Public Sector Market Size

The total value of contraceptives was calculated by applying average unit prices to total shipment volumes. Average unit prices by method and year are based on the average price between USAID and UNFPA as reported in UNFPA's Contraceptive Price Indicator. Although there are different prices for different products and markets, we estimate implied spend using UNFPA's Contraceptive Price Indicator prices for simplicity.<sup>51</sup> Finally, the Implant Access Program price of US\$8.50 was applied to

implant volumes from 2013 to 2016. The average price only includes the cost of the product and does not account for additional costs associated with procurement such as testing, insurance, and shipping costs.

To maintain consistency across dollar-value comparisons, this average pricing was applied to all market size and donor-funding trends across supplier-reported and RHI reported volumes. As a result, numbers may differ from the RHI reported value field.

EXHIBIT C.9: AVERAGE UNIT PRICE

| Method                 | PRICE RANGE |         | 2011       | 2012       | 2013       | 2014       | 2015 <sup>52</sup> | 2016 <sup>53</sup> |
|------------------------|-------------|---------|------------|------------|------------|------------|--------------------|--------------------|
|                        | Minimum     | Maximum | Unit Price | Unit Price | Unit Price | Unit Price | Unit Price         | Unit Price         |
| Condoms - Female       | \$0.49      | \$0.56  | \$0.56     | \$0.55     | \$0.54     | \$0.53     | \$0.52             | \$0.49             |
| Condoms - Male         | \$0.03      | \$0.03  | \$0.03     | \$0.03     | \$0.03     | \$0.03     | \$0.03             | \$0.03             |
| Implants               | \$8.50      | \$18.65 | \$18.65    | \$17.98    | \$8.50     | \$8.50     | \$8.50             | \$8.50             |
| Injectables            | \$0.81      | \$0.83  | \$0.82     | \$0.82     | \$0.83     | \$0.81     | \$0.81             | \$0.82             |
| IUDs                   | \$0.43      | \$0.48  | \$0.43     | \$0.43     | \$0.43     | \$0.48     | \$0.47             | \$0.46             |
| Orals - Combined       | \$0.26      | \$0.31  | \$0.31     | \$0.30     | \$0.28     | \$0.30     | \$0.28             | \$0.26             |
| Orals - Progestin Only | \$0.31      | \$0.33  | \$0.32     | \$0.32     | \$0.31     | \$0.31     | \$0.32             | \$0.33             |
| Orals - Emergency      | \$0.30      | \$0.49  | \$0.34     | \$0.49     | \$0.44     | \$0.30     | \$0.37             | \$0.35             |

Notes: [1] For 2013-2016 implants, the Implant Access Program price is used; [2] The range and average unit price in each corresponding is based on average USAID and UNFPA prices via UNFPA's Contraceptive Price Indicators.

Sources: [1] UNFPA Contraceptive Price Indicator, 2011–2016; [2] IAP Implant Prices.

51. UNFPA, "UNFPA Contraceptive Price Indicator—Year 2016", available at [http://www.unfpa.org/sites/default/files/resource-pdf/UNFPA\\_Contraceptives\\_Price\\_Indicator\\_2016\\_Published.pdf](http://www.unfpa.org/sites/default/files/resource-pdf/UNFPA_Contraceptives_Price_Indicator_2016_Published.pdf), UNFPA Contraceptive Price Indicator—Year 2015," available at: [https://www.unfpa.org/sites/default/files/resource-pdf/UNFPA\\_Contraceptive\\_Price\\_Indicators.pdf](https://www.unfpa.org/sites/default/files/resource-pdf/UNFPA_Contraceptive_Price_Indicators.pdf), "UNFPA Contraceptive Price Indicator—Year 2014," available at <http://www.unfpa.org/resources/contraceptive-price-indicator-2014>, "UNFPA Contraceptive Price Indicators—2013," available at <http://www.unfpa.org/sites/default/files/resource-pdf/UNFPA%20Contraceptive%20Price%20Indicators%20-%202013.pdf>, "UNFPA Contraceptive Price Indicators—2012," available at <http://www.unfpa.org/sites/default/files/resource-pdf/UNFPA%20Contraceptive%20Price%20Indicators%20-%202012.pdf>, "UNFPA Contraceptive Price Indicators—2011", UNFPA.

52. The 2015 unit pricing is an average of UNFPA 2015 prices and USAID 2014 prices as USAID 2015 prices were unavailable.

53. The 2016 unit pricing is UNFPA 2016 price only as USAID 2016 pricing is unavailable, with the exception of IUDs where the average of USAID 2014 price and UNFPA 2016 price was taken to avoid significant fluctuations.

## APPENDIX D – ESTIMATING TOTAL FP2020 DONOR-FUNDED VOLUMES

To protect customer confidentiality, suppliers were not asked to disclose customer information associated with shipment volumes. Instead, CHAI relied upon RHI to estimate the donor-funded volumes and in turn, CYPs and costs. RHI data contains shipment volume data reported by central procurement offices of major contraceptive orders and other organizations that procure contraceptives. This includes organizations such as IPPF, MSI, PSI, USAID, and UNFPA. From 2011 to 2016, the following funding sources were associated with shipment volumes to 69 FP2020 countries and shipment volumes to procurer warehouses that are reported into RHI:

For the purposes of this analysis, national procurements identified as “OTHERGOV” and “MOH” as well as unknown funding sources identified as “OTHER” have been excluded. These may include volumes associated with UNFPA third party procurements or SMOs procurements using unidentified funding sources. It is important to note that RHI only includes data for procurement agencies that are data providers. There may be other donor-funded procurements that are not reported into RHI.

EXHIBIT D.1: FP2020 FUNDING SOURCES REPORTING TO RHI, 2011–2016

| FUNDING SOURCES |             |           |
|-----------------|-------------|-----------|
| AFDB            | IPPF        | PSI       |
| BMGF            | KFW         | UNDP      |
| CDC             | MOH         | UNFPA     |
| DFID            | MSI         | UNPEACE   |
| DKT             | NETHERLANDS | USAID     |
| GLOBALFUND      | OTHER       | USDOD     |
| ICA             | OTHERGOV    | WORLDBANK |

## APPENDIX E – ADDITIONAL MARKETS VISIBILITY

CHAI conducted supplementary research and analysis using publicly available sources of data in three large markets: Bangladesh, India, and Indonesia—key countries where it was identified in the 2016 Family Planning Market Report that there may be significant public sector local and regional procurement not captured in the Global Markets Visibility Volumes. Due to the limitations of these data sources, CHAI cannot confirm comprehensive coverage of the public sector markets in these countries. Rather, the data is meant to be used as initial confirmation of local and regional procurement in these markets that are not covered by the suppliers participating in this report.

### Bangladesh

CHAI used data from the government of Bangladesh’s Ministry of Health and Family Welfare (MOHFW)<sup>54</sup> for 2015 and 2016.<sup>55</sup>

| EXHIBIT E.1: MOHFW SUPPLY CHAIN CONTRACEPTIVE SHIPMENT RECEIPT DETAILS |                                             |             |            |
|------------------------------------------------------------------------|---------------------------------------------|-------------|------------|
| PRODUCT NAME                                                           | SUPPLIER NAME                               | 2015        | 2016       |
| CONDOM                                                                 | ESSENTIAL DRUGS CO. LTD.                    | 50,000,000  | 68,850,000 |
| CONDOM                                                                 | KHULNA ESSENTIAL LATEX PLANT((KELP)         | 100,000,000 | 35,000,000 |
| ECP (2 TAB/PACK)                                                       | M/S, RENETA LTD.                            | 100,000     | 100,000    |
| IMPLANT (2 ROD)                                                        | SOCIAL MARKETING COMPANY (SMC)              | -           | 17,000     |
| IMPLANT (SINGLE ROD)                                                   | JAMES INTERNATIONAL                         | -           | 5          |
| IMPLANT (SINGLE ROD)                                                   | Merck Sharp & Dohme B.V.(MSD B.V.)          | -           | 150,000    |
| IMPLANT (SINGLE ROD)                                                   | MSD-NV Organon, Organon(India) Private Ltd. | 50,000      | -          |
| INJECTABLES (DMPA IM)                                                  | Helm-AG                                     | 14,000,000  | -          |
| INJECTABLES (DMPA IM)                                                  | TECHNO DRUGS Ltd                            | 2,500,000   | 8,100,000  |
| IUD (CT-380A)                                                          | SARBAN INTERNATIONAL LTD.                   | 400,000     | -          |
| IUD (CT-380A)                                                          | SOCIAL MARKETING COMPANY (SMC)              | 73,679      | -          |
| ORAL CONTRACEPTIVE PILL (SHUKHI)                                       | HLL Lifecare Limited                        | 22,469,025  | -          |
| ORAL CONTRACEPTIVE PILL (SHUKHI)                                       | M/S, RENETA LTD.                            | 20,730,975  | 54,750,000 |
| ORAL CONTRACEPTIVE PILL (SHUKHI)                                       | Maneesh Pharmaceuticals Limited             | 22,289,280  | -          |
| ORAL CONTRACEPTIVE PILL (SHUKHI)                                       | Popular Pharmaceuticals Ltd.                | 10,800,000  | 14,250,000 |
| ORAL CONTRACEPTIVE PILL (SHUKHI)                                       | TECHNO DRUGS Ltd                            | 1,710,720   | -          |
| ORAL PILL APON                                                         | M/S, RENETA LTD.                            | 1,000,000   | 3,500,000  |

Source: Bangladesh MOHFW, Supply Chain Management Portal, 2017.

54. Government of Bangladesh, Ministry of Health and Family Welfare, “MOHFW Supply Chain Management Portal – National Receive Details; Product Group: Contraceptive; Product Name: ALL; Warehouse: ALL” available at: <https://scmpbd.org/index.php/wims-reports/national-receive-details>

55. The fiscal year for Bangladesh runs from July 1 to June 30, but for the purposes of this analysis, CHAI summed up the monthly data by calendar year for 2015 and 2016. Data is not reported prior to February 2015, thus the 2015 calendar year may be missing data for the month of January.

## APPENDIX E – ADDITIONAL MARKETS VISIBILITY

### India

CHAI looked at data from the Indian government's MOHFW Annual Reports<sup>56</sup> for fiscal years 2013/2014, and 2014/2015<sup>57</sup> for the India market. The MOHFW distributes contraceptives to the states/UTs through Free Supply Scheme and Social Marketing Scheme; only modern contraceptive methods including condoms,<sup>58</sup> oral pills (orals – combined), IUDs, and ECPs (orals – emergency) are included in this analysis. While the

MOHFW Annual Reports do not record who the awarded suppliers are, a report from USAID has identified local suppliers and the contraceptives they supply to the government and SMO programs as of 2006, including Indian Drug and Pharmaceutical Ltd. (IDPL), HLL Lifecare Limited, Pharmasia, Pregna International, SMB Corporation, Cipla, Win-Medicare, and Famy Care, which is now Mylan.

### EXHIBIT E.2: ANNUAL REPORT OF DEPARTMENT OF HEALTH & FAMILY WELFARE FOR THE YEAR OF 2015-16 (INCLUDES FULL FISCAL YEARS 2013-14 TO 2014-15)

| EXHIBIT E.2.1: QUANTITIES SUPPLIED TO STATES/UTS |         |         |                         |
|--------------------------------------------------|---------|---------|-------------------------|
| CONTRACEPTIVES                                   | 2013-14 | 2014-15 | 2015-16 (UP TO NOV. 15) |
| Condoms (In million pieces)                      | 394     | 350.9   | 465.4                   |
| Oral Pills (In lakh cycles)                      | 361.24  | 551.32  | 255.2                   |
| IUDs (In lakh pieces)                            | 60.42   | 88.244  | 37.62                   |
| Tubal Rings (In lakh pairs)                      | 19      | 27145   | 7.82                    |
| ECP(in lakh packs)                               | 75.8    | 75.8    | 41.92                   |
| Pregnancy Test Kits (in lakhs)                   | 100.14  | 122.4   | 166.12*                 |

\*Figures are Provisional

| EXHIBIT E.2.2: PERFORMANCE OF SOCIAL MARKETING PROGRAMME IN THE SALE OF CONTRACEPTIVE |         |         |         |                           |
|---------------------------------------------------------------------------------------|---------|---------|---------|---------------------------|
| CONTRACEPTIVES                                                                        | 2012-13 | 2013-14 | 2014-15 | 2015-16 (UP TO NOV. 2015) |
| Condoms (Million pieces)                                                              | 618.18  | 698.33  | 683.93  | 157.05                    |
| Oral Pills (Social Marketing) (lakh cycles)                                           | 376.82  | 290.27  | 276.44  | 80.23                     |
| SAHELI (in Lakh tablets)                                                              | 270.76  | 279.35  | 314.6   | 8.787*                    |

| EXHIBIT E.2.3: EMERGENCY CONTRACEPTIVE PILLS [ECP] |         |         |                    |
|----------------------------------------------------|---------|---------|--------------------|
| ITEM                                               | 2013-14 | 2014-15 | 2015-16 (NOV.2015) |
| ECP                                                | 75.80   | 75.80   | 41.92              |

Source: India MOHFW Annual Report, 2015-2016.

56. Government of India, Ministry of Health and Family Welfare, "Annual Report of Department of Health & Family Welfare for the year of 2015-16", "Annual Report of Department of Health & Family Welfare for the year of 2014-15", "Annual Report of Department of Health & Family Welfare for the year of 2013-14" available at: <http://www.mohfw.nic.in/documents/publications>

57. The fiscal year for India runs from April 1 to March 31, as such 2015/2016 figures were not included in this analysis as the reported data is not a full fiscal year.

58. Condoms are reported in millions whereas all other methods are reported as "lakh" – the Indian unit of 100,000.

## APPENDIX E – ADDITIONAL MARKETS VISIBILITY

### EXHIBIT E.3: ANNUAL REPORT OF DEPARTMENT OF HEALTH & FAMILY WELFARE FOR THE YEAR OF 2013-14 (INCLUDES FULL FISCAL YEARS 2010-11 TO 2012-13)

| EXHIBIT E.3.1: QUANTITIES SUPPLIED TO STATES/UTS |         |         |         |                               |
|--------------------------------------------------|---------|---------|---------|-------------------------------|
| CONTRACEPTIVES                                   | 2010-11 | 2011-12 | 2012-13 | 2013-14<br>(UP TO SEPT. 2013) |
| Condoms (In million pieces)                      | 290.137 | 295.000 | 367.866 | 234.271                       |
| Oral Pills (In lakh cycles)                      | 237.998 | 298.135 | 226.793 | 205.573                       |
| IUDs (In lakh pieces)                            | 90.000  | 73.500  | 87.508  | 34.005                        |
| Tubal Rings (In lakh pairs)                      | 34.534  | 30.359  | 31.22   | 18.274                        |
| ECP (in lakh packs)                              | 21.540  | 18.300  | 75.919  | 14.098                        |
| Pregnancy Test Kits (in lakhs)                   | 211.74  | 21174   | 222.186 | 0.00                          |

| EXHIBIT E.3.2: QUANTITIES SUPPLIED TO STATES/UTS |           |         |         |                               |
|--------------------------------------------------|-----------|---------|---------|-------------------------------|
| CONTRACEPTIVES                                   | 2010-11   | 2011-12 | 2012-13 | 2013-14<br>(UP TO SEPT. 2013) |
| Condoms (Million pieces)                         | 581.44    | 677.91  | 618.18  | 315.19                        |
| Oral Pills (Social Marketing) (lakh cycles)      | 358.08    | 471.975 | 376.82  | 124.79                        |
| SAHELI Weekly Oral Pill (in lakh tablet)         | 234.31904 | 244.56  | 270.76  | 0.042*                        |

\*Figures are Provisional

| EXHIBIT E.3.3: EMERGENCY CONTRACEPTIVE PILLS [ECP] |         |         |         |                                |
|----------------------------------------------------|---------|---------|---------|--------------------------------|
| CONTRACEPTIVES                                     | 2010-11 | 2011-12 | 2012-13 | 2013-14<br>(UP TO SEPT. 2013)* |
| ECP                                                | 21.54   | 18.30   | 75.919  | 14.098                         |

\*Figures are Provisional

| EXHIBIT E.4: LOCAL MANUFACTURERS & THEIR PRODUCTS IN INDIA* |                                            |
|-------------------------------------------------------------|--------------------------------------------|
| METHOD                                                      | SUPPLIER NAME                              |
| Condoms                                                     | HLL Lifecare Limited                       |
| Injectables                                                 | HLL Lifecare Limited                       |
|                                                             | Famy Care (Mylan)                          |
| IUDs                                                        | Pregna International                       |
|                                                             | SMB Corporation                            |
|                                                             | Famy Care (Mylan)                          |
| Orals                                                       | Indian Drug and Pharmaceutical Ltd. (IDPL) |
|                                                             | HLL Lifecare Limited                       |
|                                                             | Phaarmasia                                 |
|                                                             | Famy Care (Mylan)                          |
|                                                             | Win-Medicare                               |
|                                                             | Cipla                                      |

\* USAID, "Assessment of India's locally manufactured contraceptive product supply", 2006, available at: [http://pdf.usaid.gov/pdf\\_docs/Pnadf989.pdf](http://pdf.usaid.gov/pdf_docs/Pnadf989.pdf)



## APPENDIX E – ADDITIONAL MARKETS VISIBILITY

### Indonesia

For the Indonesian market, CHAI looked at the awarded government tender documents from the National Family Planning Coordinating Body (BKKBN)<sup>60</sup> for 2015<sup>61</sup> and 2016<sup>62</sup> to sum up the quantities by method. The 2016 tender documents indicate the manufacturer; however, the 2015 documents refer only to distributors.

| EXHIBIT E.5: MULTIPLE TENDER WINNER ANNOUNCEMENTS |                             |                                       |            |
|---------------------------------------------------|-----------------------------|---------------------------------------|------------|
| YEAR                                              | PRODUCT                     | DISTRIBUTOR                           | QUANTITY   |
| 2015                                              | Combination Pills           | PT Indofarma Global Medika            | 11,776,656 |
| 2015                                              | Combination Pills           | PT Perintis Bina Utama Farmasi        | 15,114,124 |
| 2015                                              | Combination Pills           | PT Kimia Farma Trading & Distribution | 4,042,768  |
| 2015                                              | 3-month Injectables         | PT Indofarma Global Medika            | 13,019,861 |
| 2015                                              | 3-month Injectables         | PT Trijaya Medika Farma               | 12,950,506 |
| 2015                                              | 3-month Injectables         | PT Trijaya Medika Farma               | 13,067,747 |
| 2015                                              | 3-month Injectables         | PT Trijaya Medika Farma               | 13,497,338 |
| 2015                                              | 2-rod implants w/ inserters | PT Djaja Bima Agung                   | 164,710    |
| 2015                                              | 2-rod implants w/ inserters | PT Djaja Bima Agung                   | 166,270    |
| 2015                                              | 2-rod implants w/ inserters | PT Djaja Bima Agung                   | 192,793    |
| 2015                                              | 2-rod implants w/ inserters | PT Djaja Bima Agung                   | 172,010    |

| EXHIBIT E.6: MULTIPLE TENDER WINNER ANNOUNCEMENTS |                             |                                |            |
|---------------------------------------------------|-----------------------------|--------------------------------|------------|
| YEAR                                              | PRODUCT                     | DISTRIBUTOR                    | QUANTITY   |
| 2016                                              | Combination Pills           | PT Harsen Laboratories         | 11,648,300 |
| 2016                                              | Combination Pills           | PT Kimia Farma                 | 17,626,000 |
| 2016                                              | Combination Pills           | PT Pratapa Nirmala             | 8,793,200  |
| 2016                                              | Combination Pills           | PT Sunthi Sepuri               | 8,829,100  |
| 2016                                              | Combination Pills           | PT Triyasa Nagamas Farma       | 17,540,300 |
| 2016                                              | 3-month Injectables         | PT Catur Dakhwah Crane Farmasi | 7,289,160  |
| 2016                                              | 3-month Injectables         | PT Harsen Laboratories         | 21,895,860 |
| 2016                                              | 3-month Injectables         | PT Triyasa Nagamas Farma       | 14,474,540 |
| 2016                                              | 3-month Injectables         | PT Tunggal Idaman Abadi        | 7,348,980  |
| 2016                                              | 2-rod implants w/ inserters | PT Catur Dakhwah Crane Farmasi | 633,680    |
| 2016                                              | 2-rod implants w/ inserters | PT Harsen Laboratories         | 633,660    |
| 2016                                              | 2-rod implants w/ inserters | PT Triyasa Nagamas Farma       | 633,660    |

Sources: [Exhibit E.5] BKKBN Tender Documents, 2015. [Exhibit E.6] BKKBN Tender Documents, 2016.

60. Family Planning and Reproductive Health Unit, National Family Planning Coordinating Body (BKKBN)

61. Tender Winner Announcement documents available at <http://lpse.bkkbn.go.id/eproc/>

62. Tender Winner Announcement documents available at [https://e-katalog.lkpp.go.id/backend/katalog/list\\_produk/63](https://e-katalog.lkpp.go.id/backend/katalog/list_produk/63)

## APPENDIX F – EXPLORING POTENTIAL CONTRIBUTING FACTORS TO THE 2015 TO 2016 MARKET DECLINE

CHAI analyzed consumption data from the Procurement Planning and Monitoring Report (PPMR)<sup>63</sup> for 34 countries. First, CHAI estimated the annual consumption of products using the average monthly consumption (AMC) figures by country by method for each year. Then, CHAI divided the product volumes for each method by the corresponding CYP per unit to derive the annual consumption in total CYPs. The exhibit F.1 shows annual consumption data by method.

| EXHIBIT F.1: ANNUAL PPMR CONSUMPTION DATA |              |              |
|-------------------------------------------|--------------|--------------|
| METHOD (CONSUMPTION IN MILLIONS OF CYPs)  | 2015         | 2016         |
| Implants                                  | 15.0 M       | 16.2 M       |
| IUDs                                      | 13.8 M       | 13.5 M       |
| Injectables                               | 19.5 M       | 19.0 M       |
| Condoms - Male                            | 13.6 M       | 12.0 M       |
| Condoms - Female                          | 0.2 M        | 0.2 M        |
| Orals - Combined & Progestin Only         | 12.9 M       | 11.9 M       |
| Orals - Emergency                         | 12.0 M       | 11.1 M       |
| <b>Total</b>                              | <b>75.1M</b> | <b>73.1M</b> |

CHAI also analyzed consumption data for Bangladesh from the MOHFW supply chain reports<sup>64</sup>. CHAI summed up the data by year to get annual consumption in product volumes and divided the volumes for each method by the corresponding CYP per unit to derive the annual consumption in total CYPs. The table below shows annual consumption data by method.

| EXHIBIT F.2: ANNUAL MOHFW BANGLADESH CONSUMPTION |               |               |               |               |               |               |
|--------------------------------------------------|---------------|---------------|---------------|---------------|---------------|---------------|
| METHOD (CONSUMPTION IN MILLIONS OF CYPs)         | 2011          | 2012          | 2013          | 2014          | 2015          | 2016          |
| Condoms                                          | 0.8 M         | 0.8 M         | 0.8 M         | 1.0 M         | 1.1 M         | 1.1 M         |
| Implants                                         | 1.3 M         | 1.3 M         | 1.2 M         | 1.1 M         | 1.1 M         | 1.1 M         |
| Injectables                                      | 3.4 M         | 3.4 M         | 3.3 M         | 3.4 M         | 3.3 M         | 3.2 M         |
| IUDs                                             | 1.1 M         | 1.1 M         | 1.2 M         | 1.2 M         | 1.2 M         | 1.2 M         |
| Orals                                            | 7.3 M         | 7.3 M         | 7.1 M         | 7.1 M         | 6.9 M         | 6.6 M         |
| <b>Total</b>                                     | <b>13.8 M</b> | <b>13.9 M</b> | <b>13.6 M</b> | <b>13.8 M</b> | <b>13.5 M</b> | <b>13.3 M</b> |

Sources: [Exhibit F.1] Procurement Planning and Monitoring Report (PPMR), May 2017. [Exhibit F.2] Bangladesh MOHFW Supply Chain Management Portal

63. Procurement Planning and Monitoring Report (PPMR): Produced monthly by the USAID | Global Health Supply Chain Program-Procurement and Supply Management (GHSCP-PSM), this online database provides information on consumption and current/desired stock levels of contraceptive products on a country-by-country basis for 34 countries as of June 2015. Data is provided by MOHs, partners such as MSH, SMOs (MSI, PSI, DKT), and UNFPA. Available at <http://ppmr.rhsupplies.org/content?id=1>

64. Available at <https://scmpbd.org/index.php/lmis-report/month-wise-consumption>

## APPENDIX G – KEY TERMS AND DEFINITIONS

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### CYP

Couple Years of Protection (CYP) is the estimated protection provided by contraceptive methods during a one-year period e.g. 120 condoms provide a couple protection for one year.

### CYP mix

CYP mix refers to the percentage distribution of CYPs shipped by method.

### Market Value

Market value refers to the supplier-reported shipment volume multiplied by the average prices of UNFPA and USAID for the specific years.

### Market Share

Market share is the percentage of total value of shipment volumes in a market captured by a certain contraceptive method.

### Shipments or Shipment Volumes

Shipment volumes refers to the amount of a particular contraceptive method that has been transported.

### Total FP2020 Public Sector Market

The total FP2020 public sector market is based on volumes purchased by institutional buyers and MOH or government-affiliated procurers based on RHI data (male condoms) and historical supplier-reported shipment data (female condoms, implants, injectables, IUDs, and orals) for the 69 FP2020 focus countries, defined as countries with a 2010 gross national per capita annual income (GNI) less than or equal to US\$2,500. Although South Africa made an FP2020 commitment, its GNI was greater than US\$2,500.

## APPENDIX H – ACRONYMS

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|        |                                                    |
|--------|----------------------------------------------------|
| CHAI   | CLINTON HEALTH ACCESS INITIATIVE                   |
| CYP    | COUPLE-YEARS OF PROTECTION                         |
| FP     | FAMILY PLANNING                                    |
| FP2020 | FAMILY PLANNING 2020                               |
| GEMS   | GENERIC MANUFACTURERS FOR REPRODUCTIVE HEALTH      |
| IUD    | INTRA-UTERINE DEVICE                               |
| LAM    | LACTATIONAL AMENORRHEA METHOD                      |
| LARC   | LONG-ACTING REVERSIBLE CONTRACEPTIVES              |
| MOH    | MINISTRY OF HEALTH                                 |
| MOHFW  | MINISTRY OF HEALTH AND FAMILY WELFARE              |
| RHSC   | REPRODUCTIVE HEALTH SUPPLIES COALITION             |
| RHI    | REPRODUCTIVE HEALTH INTERCHANGE                    |
| SMO    | SOCIAL MARKETING ORGANIZATION                      |
| USAID  | UNITED STATES AGENCY FOR INTERNATIONAL DEVELOPMENT |
| UNFPA  | UNITED NATIONS POPULATION FUND                     |