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FINSCOPE CUSTOMER SURVEY 2020

Methodology

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ABBREVIATIONS AND ACRONYMS

AFR	Access to Finance Rwanda
AFRIC	Access to Finance Rwanda Investment Committee
BNR	National Bank of Rwanda
CESS	Centre for Economic and Social Studies
CSPro	Census and Survey Processing System
DFID	Department Fund for International Development
EA	Enumeration Area
EDPRS	Economic Development and Poverty Reduction Strategy
FSDP	Financial Sector Development Programme
KfW	Kreditanstalt für Wiederaufbau
KPMG	Klynveld Peat Marwick Goerdeler
MINECOFIN	Ministry of Finance and Economic Planning
NISR	National Institute of Statistics of Rwanda
QC	Quality Control
QCI	Quality Control Interviewer
QCS	Quality Control and Support teams
SIM	Subscriber Identity Module
UK	United Kingdom

I. INTRODUCTION

1.1. BACKGROUND

AFR is a local not for profit company limited by guarantee, established in March 2010 by the UK Department for International Development (DFID) at the request of the Government of Rwanda. Current funders of AFR include DFID, The MasterCard Foundation, Sweden and USAID. AFR's strategic focus is stimulating financial sector development by partnering with financial institutions and other stakeholders to increase access to and use of financial services. AFR is guided by the making Markets Work for the Poor (M4P) approach recognizing that efforts to increase financial inclusion have to be market led and profitable for sustainability. AFR supports the Government of Rwanda's development objectives by aligning all its interventions to the national policy frameworks including the National Transformation Strategy 2018-2024 which prioritises economic transformation to improve quality of life for the average citizen. Transformation strategies put the citizen at the centre of the development agenda leveraging inclusive financial sector development, efficient resource allocation to sector and business models that drive value addition, productivity and inclusive growth.

In pursuit of its objectives, AFR will contribute to a basket of funding to implement the FinScope Rwanda 2020 survey. The FinScope survey is a research tool that was developed by FinMark Trust¹. It is a nationally representative study which provides insights and understanding with regard to how individuals generate money and how they manage their financial lives. In pursuit of its objectives, the AFR will be funding the FinScope Customer Survey 2020. The FinScope Survey is a research tool that was developed by FinMark Trust. It is a nationally representative study which provides insights and understanding with regard to how individuals generate money and how they manage their financial lives. The FinScope Rwanda 2020 survey will be the fourth FinScope survey conducted in Rwanda. The first survey was conducted by FinMark Trust in 2008 under the auspices of the National Bank of Rwanda. The main objective with this survey was to provide baseline data on access to financial services in Rwanda and to provide insights and understanding in assistance to the Rwandan Government in terms of the Economic Development and Poverty Reduction Strategy I (EDPRS I). Since then, the FinScope study results have been widely used by government and private sector for policy and strategic decisions.

The FinScope Customer Survey 2020 will be the fourth FinScope Survey conducted in Rwanda. The first survey was conducted by FinMark Trust in 2008 under the auspices of the National Bank of Rwanda. The main objective with this survey was to provide baseline data on access to financial services in Rwanda and to provide insights and understanding in assistance to the Rwandan Government in terms of the Economic Development and Poverty Reduction Strategy I (EDPRS I).

The FSDPII underscores the need to continuously assess the progress made towards achieving the financial inclusion objectives/targets for Rwanda, and the FinScope Survey is suggested as the main reliable way to do assess progress. It is against this background that AFR conducted the FinScope Rwanda 2012 Survey. The results of the 2012 survey have been widely used by government for policy and strategic guidance of the financial sector through the Financial Sector Development Program II (FSDPII), and have been used by the private financial institutions for strategic decisions. In 2015, AFR conducted the FinScope Rwanda 2015/2016 Survey to track trends within the financial sector, provide information on how the landscape of access has changed since 2012, and provide insights into what can be done at both the policy

¹ FinMark Trust is an independent trust based in Johannesburg, South Africa, established in March 2002 with funding from the UK's Department for International Development (DIFD), and whose purpose is 'Making financial markets work for the poor, by promoting financial inclusion and regional financial integration'.

and market level to increase financial inclusion further. AFR will therefore once again be funding the implementation of the FinScope Customer Survey 2020.

CESS Ltd was awarded the FinScope Rwanda Survey contract in 2012, and the FinScope Rwanda Survey in 2015 by AFR, and has been contracted again to do the fieldwork for the FinScope Customer Survey 2020 by planning and conducting primary data collection, which includes drawing sample, subcontracting the in-country survey organization, developing the protocol and manuals, training the survey staff, overseeing data collection, and managing data.

1.2. SURVEY OBJECTIVES

The broad objective of the FinScope Rwanda 2020 survey is to track trends within the financial sector, to provide information on how the landscape of access and usage has changed since 2016, and to provide insights into what can be done at both the policy and market level to increase financial inclusion further. AFR and other stakeholders will use the findings to support the development and delivery of services for lower income households, and to assist policy makers to ensure an enabling environment within which these services can be delivered.

The information gathered from the survey will provide a better understanding of the adult population in terms of:

- Their demographic and geographic distribution
- Their livelihoods and how they generate their income
- Their financial needs and/or demands
- Their financial perceptions, attitudes, and behaviour
- Current levels of access to, and utilisation of, financial services and products (formal and/or informal)
- The landscape of access (i.e. types of products used in terms of transactions, savings, credit, insurance and remittances)
- Drivers of financial product uptake and service utilisation
- Barriers to uptake and utilisation of financial products and services
- The size of the market²
- The commonalities and differences between different market segments.

2. METHODOLOGY

2.1. SAMPLING FRAME FOR FINSCOPE CUSTOMER SURVEY 2020

This section describes the sampling frame, a study of the sampling errors and design effects for estimates of households with a person aged 16 years and above owning a bank account by district, and the recommended sample size and allocation for the FinScope 2020. The sample selection procedures are also described in this section.

2.1.1. SAMPLING FRAME FOR FINSCOPE RWANDA 2015/2016 SURVEY

The FinScope is a household's survey which is based on the data and cartographic materials from the 2012 Rwanda Population and Housing Census. Rwanda is divided geographically into 5 provinces, 30 districts, 416 sectors, 2,148 cells and 14,816 villages.

Table 1 shows distribution of the villages in the 2012 Census frame by district. This table also shows the number of urban and rural villages in the 2012 Census frame by district. It can be seen in Table 1 that at national level the 2012 Census frame has 1,607 urban villages and 13,209 rural villages.

The sample PSUs for the FinScope will be selected as a subsample of the 2012 Census frame PSUs. A listing of households will be conducted in each sample village selected for the FinScope, and a sample of households will be selected at the last sampling stage. The sample design and selection procedures for the FinScope survey are described later in this section. The units of analysis for the survey will be the individual households and persons who are usual residents in those households.

Table 1: Distribution of Villages in the 2012 Census Frame by District, and by Urban and Rural Strata

Province	District code	District name	Number of Villages in 2012 Census frame		
			Urban	Rural	Total
Kigali City	11	Nyarugenge	240	110	350
	12	Gasabo	257	229	486
	13	Kicukiro	266	61	327
Southern	21	Nyanza	31	389	420
	22	Gisagara	6	518	524
	23	Nyaruguru	5	327	332
	24	Huye	51	457	508
	25	Nyamagabe	23	513	536
	26	Ruhango	35	498	533
	27	Muhanga	23	308	331
28	Kamonyi	24	293	317	
Western	31	Karongi	31	507	538
	32	Rutsiro	8	476	484
	33	Rubavu	157	362	519
	34	Nyabihu	41	432	473
	35	Ngororero	10	409	419
	36	Rusizi	70	526	596
	37	Nyamasheke	7	581	588
Northern	41	Rulindo	11	483	494
	42	Gakenke	15	602	617
	43	Musanze	70	362	432
	44	Burera	9	562	571
	45	Gicumbi	28	602	630
Eastern	51	Rwamagana	27	447	474

	52	Nyagatare	44	584	628
	53	Gatsibo	22	580	602
	54	Kayonza	29	392	421
	55	Kirehe	17	595	612
	56	Ngoma	15	458	473
	57	Bugesera	35	546	581
RWANDA			1,607	13,209	14,816

Source: NISR, RPHC-2012

2.1.2. SAMPLING ERRORS AND DESIGN EFFECTS FOR KEY INDICATOR

In order to determine the sample size and allocation for the FinScope Survey 2020, it is important to measure the level of precision for the estimates of a key indicator from the latest survey. It is in that context we used EICV5 to examine the sampling error and design effects for proportion with 16 years and above which have a saving account and are the target population for FinScope Survey 2020. Since the geographic domains of analysis are the districts, it is necessary to ensure that the margins of error for the district-level estimates are acceptable. Table 2 shows the results of sampling errors and design effects for estimates of the households with at least one person with 16+ with a bank account by district. Table 2 shows that at national level the households with at least one person with 16+ with a bank account is **53.7%** with a Design Effect of 0.8% and a margin error of 0.9%. The margin error and Coefficient of variation for all district is almost the same and fall between 4 and 5 percent for margin error and 2 to 5 percent for coefficient of variation.

Table 2. Standard Errors, 95% Confidence Intervals and Design Effects for Estimates of Households with at Least One Person (16 + years) with a Saving Account by District

District Name	Estimate	Standard Error	95% Confidence Interval		Coefficient of Variation	Design Effect	Margin Error
			Lower	Upper			
Nyarugenge	67.92	2.146	63.71	72.12	.032	.931	4.2%
Gasabo	68.57	2.522	63.62	73.51	.037	3.673	4.9%
Kicukiro	72.02	2.064	67.97	76.07	.029	1.126	4.0%
Nyanza	55.69	2.298	51.19	60.20	.041	.911	4.5%
Gisagara	60.51	2.288	56.03	65.00	.038	.969	4.5%
Nyaruguru	74.57	2.029	70.59	78.55	.027	.748	4.0%
Huye	55.85	2.302	51.34	60.37	.041	.949	4.5%
Nyamagabe	73.16	2.049	69.14	77.18	.028	.895	4.0%
Ruhango	42.05	2.279	37.58	46.52	.054	.819	4.5%
Muhanga	54.55	2.299	50.04	59.06	.042	.906	4.5%
Kamonyi	41.00	2.345	36.41	45.60	.057	1.148	4.6%
Karongi	60.89	2.250	56.48	65.30	.037	.895	4.4%
Rutsiro	51.38	2.315	46.85	55.92	.045	.846	4.5%
Rubavu	42.75	2.304	38.23	47.27	.054	1.125	4.5%
Nyabihu	45.26	2.317	40.72	49.80	.051	.792	4.5%
Ngororero	47.03	2.294	42.53	51.53	.049	.941	4.5%
Rusizi	45.70	2.400	41.00	50.41	.053	1.194	4.7%
Nyamasheke	62.94	2.265	58.50	67.38	.036	.982	4.4%
Rulindo	70.67	2.130	66.49	74.84	.030	.919	4.2%
Gakenke	56.89	2.279	52.42	61.35	.040	.965	4.5%
Musanze	42.99	2.304	38.47	47.50	.054	1.062	4.5%
Burera	47.92	2.328	43.36	52.48	.049	.962	4.6%
Gicumbi	48.50	2.293	44.01	53.00	.047	1.002	4.5%
Rwamagana	51.67	2.337	47.09	56.25	.045	1.050	4.6%
Nyagatare	34.47	2.238	30.08	38.85	.065	1.587	4.4%

Gatsibo	45.35	2.289	40.86	49.84	.050	1.236	4.5%
Kayonza	40.37	2.279	35.91	44.84	.056	.970	4.5%
Kirehe	35.39	2.205	31.06	39.71	.062	1.000	4.3%
Ngoma	53.81	2.287	49.33	58.30	.042	.944	4.5%
Bugesera	56.55	2.305	52.03	61.06	.041	1.106	4.5%
Rwanda	53.71	.444	52.84	54.58	.008	1.161	0.9%

Source: NISR, EICV5 data

2.1.3. SAMPLE SIZE AND SAMPLE ALLOCATION FOR FINSCOPE CUSTOMER SURVEY 2020

The sample size for the FinScope Survey 2020 depends on the level of precision that is required for key indicators at the district level, as well as on resource constraints and logistical considerations. It is very important to ensure good quality control in order to minimize the non-sampling errors. The estimates of the sampling errors for the population with a saving account by district from the EICV5 data shown in Table 2 were examined in order to determine sample size for FinScope Survey 2020.

As the indicator of interest (p) is known. Thus, the sample size is calculated using the prevalence rate of 53.7% to maximize the sample size and reduce the margin of error. Since the non-response rate is typically under 3% in Rwanda a value of 1.03 for h (non-response rate) will be applied to adjust the sample size. For computing the sample size for FinScope Survey 2020 the information in Table 2 will be used where the prevalence will be 53.7%, Margin error (0.9%), Design Effect (1.16) Non response (3%). The sample size will be computed as follow:

$$n = \frac{z^2 p(1-p)h * def}{0.009^2}$$

Where:

n: Sample size in terms of sample households to be selected.

z = z-statistics corresponding to the level of confidence desired. The commonly used level of confidence is 95% for which z is 1.96.

p = Estimate of the indicator of interest to be measured by the study (53.7 %).

k = Factor accounting for non-response. The non-response rate is 3%. So, a value of (= 1 + 3%) for h would be conservative.

e = Margin of error, sampling errors or level of precision (0.9%).

Using the information describe above the minimum sample size needed for this study is:

$$n = \frac{1.96^2 * 0.54(1 - 0.54) * 1.03}{0.009^2} = 14,076 \text{ households}$$

At national level, the minimum sample size for FinScope Survey 2020 is 14,076 households at 0.9% margin error precision. As it was describe in Terms of reference the sample size requested is 12,480 households for this survey will be conservative. Using the sample of 12,480 households, we accept a margin error of 0.95%, which is acceptable.

2.1.4. STRATIFICATION AND SAMPLE SELECTION

The sample for the FinScope Survey 2020 is stratified sample selected in two stages from the sampling frame of villages. In order to increase the efficiency of the sample design, the sampling frame of villages was divided into 30 strata (districts) which are as homogeneous as possible. The sample selection is carried

out independently within each explicit stratum (district). The survey results will be tabulated at the district level, so each district will be an individual domain of analysis. Stratification is done by separating each district into villages.

Another important stratification variable for villages is the urban and rural classification. The frame of villages for each district will be sorted by urban and rural categories to provide implicit stratification at this level, since the villages will be selected with probability proportional to size (PPS) within each district. This first stage sampling procedure will also provide a proportional allocation of the sample to the urban and rural areas of each district. It is important to note that there are three districts in Kigali Province, which are predominantly urban and for the remaining 27 districts which are predominantly rural. Urban and rural aspects will be analyzed at national level. As there is no big difference of households between strata, equal allocation will be applied to allocate the sample size.

Table 3: Distribution of Sample Villages and Households by District

District Name	Sample Household per District	Expected Margin Error	Sample Villages per District	Sample Households per village
Nyarugenge	416	5%	26	16
Gasabo	416	5%	26	16
Kicukiro	416	4%	26	16
Nyanza	416	5%	26	16
Gisagara	416	5%	26	16
Nyaruguru	416	4%	26	16
Huye	416	5%	26	16
Nyamagabe	416	4%	26	16
Ruhango	416	5%	26	16
Muhanga	416	5%	26	16
Kamonyi	416	5%	26	16
Karongi	416	5%	26	16
Rutsiro	416	5%	26	16
Rubavu	416	5%	26	16
Nyabihu	416	5%	26	16
Ngororero	416	5%	26	16
Rusizi	416	5%	26	16
Nyamasheke	416	5%	26	16
Rulindo	416	4%	26	16
Gakenke	416	5%	26	16
Musanze	416	5%	26	16
Burera	416	5%	26	16
Gicumbi	416	5%	26	16
Rwamagana	416	5%	26	16
Nyagatare	416	5%	26	16
Gatsibo	416	5%	26	16
Kayonza	416	5%	26	16
Kirehe	416	5%	26	16
Ngoma	416	5%	26	16
Bugesera	416	5%	26	16
Rwanda	12,480	1%	780	

Source: NISR, EICV5 data

2.1.5. SAMPLE SELECTION PROCEDURE

The FinScope Survey 2020 sample selection methodology will be based on a stratified three-stage sample design. The procedures used for each sampling stage are described as follows:

First Stage Selection of Sample Villages

At the first stage 780 villages will be selected with Probability Proportional to Size (PPS) from 2012 population and households' census frame. The villages within each district will be ordered by urban and rural areas, and then geographically by sectors, cells and village codes. This will provide implicit geographic stratification of the sampling frame for each district, and ensure a proportional allocation of the sample to the urban and rural areas of each district. Then the numbers of households are cumulated down the ordered list of villages within the stratum (district). The following procedure will be used to select the sample villages in each district.

- ✓ Cumulate the measures of size (number of households) down the ordered list of villages within the stratum (district). The final cumulated measure of size will be the total number of households in the frame for the stratum (N_h).
- ✓ To obtain the sampling interval for stratum h (I_h), divide N_h by the total number of villages to be selected in stratum h (n_h): $I_h = N_h/n_h$.
- ✓ To select a random number between 0 and (I_h) and multiply it by (I_h) in order to obtain a starting number (R_h). Then, the sample villages in stratum h will be identified using the following formula:

$$S_{hi} = R_h + [I_h \times (i - 1)], \text{ rounded up,}$$

where $i = 1, 2, \dots, n_h$

The i^{th} selected village is the one with a cumulated measure of size closest to S_{hi} but not less than S_{hi} .

Second Stage Selection of Sample Households within a Sample Village

At the second stage, for each village sampled 16 households will be sampled with systematic sample selection methods after listing all eligible households in each sample village.

For each sample village, an initial systematic sample of m_{hi} households (16 for all sample villages) will be selected from the household listing using the following procedures:

- ✓ All the private households in occupied housing units should be assigned a serial number from 1 to M_{hi} , the total number of households listed.
- ✓ To obtain the sampling interval for the selection of households within the sample village (I_{hi}), divide M_{hi} by m_{hi} , and maintain 2 decimal places: $I_{hi} = M_{hi}/m_{hi}$.
- ✓ To select a random number with 2 decimal places, between 0.01 and I_{hi} , to be multiplied by (I_{hi}) in order to obtain a starting number (R_{hi}). Finally, the sample households within the sample village will be identified as following:

$$S_{hij} = R_{hi} + [I_{hi} \times (j - 1)], \text{ rounded up,}$$

where $j = 1, 2, 3, \dots, m_{hi}$

The j^{th} selected household is the one with a serial number equal to S_{hij} .

Third Stage Selection of Qualified member for interview within a Sample Household

From the listing of sample household members, a Kish Grid will be used to select the eligible household member to be interviewed. Only adult persons (16 years old and above) are eligible for the FinScope Survey. Therefore, only one adult person will be selected from each sample household. The units of analysis for the FinScope Survey will be the adult persons in these households. The following procedures will be used to identify who will be interviewed from the sample household listing.

- ✓ Find the number running down the left side of the table that matches the last 2 digits of the questionnaire number as numbered in each district, and the total number of household members that qualify running across the top of the table.
- ✓ Circle the number where these two numbers meet in the table (intersection).
- ✓ This is the number of the person that will be interviewed.

Table 2. Kish Grid

Questionnaire Number Ends In				Number of qualifying adults in household the qualified respondent must be drawn from																								
				1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
01	26	51	76	1	1	1	3	2	4	1	3	5	8	6	5	12	10	1	6	8	7	19	19	13	21	13	24	25
02	27	52	77	1	2	3	4	3	1	2	2	3	4	8	3	7	2	5	14	4	15	4	8	6	16	14	22	19
03	28	53	78	1	1	2	1	4	2	7	6	9	3	5	11	2	1	3	11	7	10	16	16	10	5	2	2	3
04	29	54	79	1	2	3	2	1	3	5	8	6	2	4	2	4	8	11	10	16	6	9	10	15	11	12	11	18
05	30	55	80	1	1	1	4	5	6	3	5	7	5	9	8	13	3	2	13	5	18	1	4	1	20	11	5	24
06	31	56	81	1	2	2	2	3	5	6	7	8	7	1	4	9	14	8	2	17	17	14	12	14	22	10	3	14
07	32	57	82	1	2	1	1	4	1	4	1	4	6	3	6	5	7	13	9	2	3	13	14	8	2	7	20	4
08	33	58	83	1	1	2	3	2	5	1	4	2	1	7	10	6	5	4	15	10	5	2	13	4	17	5	17	8
09	34	59	84	1	1	3	2	5	6	2	2	1	9	10	1	10	4	6	6	1	9	10	1	5	6	9	1	12
10	35	60	85	1	2	2	4	1	3	3	6	9	10	11	12	3	9	15	7	8	11	6	3	9	4	3	10	1
11	36	61	86	1	1	1	3	1	4	5	3	1	6	2	9	13	11	14	4	11	4	15	15	17	1	1	23	2
12	37	62	87	1	2	3	1	3	2	7	5	6	5	7	7	8	6	10	3	3	1	12	20	7	13	22	12	16
13	38	63	88	1	1	2	1	5	3	6	4	3	4	6	2	11	13	12	1	15	8	7	2	12	15	21	13	7
14	39	64	89	1	2	3	2	4	1	4	7	8	2	5	6	11	12	9	16	13	16	11	18	18	14	16	18	23
15	40	65	90	1	2	1	4	2	4	3	8	7	7	11	1	3	5	7	12	14	13	8	17	20	19	20	19	11
16	41	66	91	1	1	3	3	1	6	5	1	5	9	10	3	2	11	13	8	12	12	5	6	21	8	8	4	15
17	42	67	92	1	1	2	3	4	2	6	4	2	3	2	12	5	2	10	13	5	8	18	9	16	10	17	16	20
18	43	68	93	1	2	1	4	2	6	4	1	4	8	9	10	7	9	3	12	12	9	7	20	19	9	19	21	13
19	44	69	94	1	2	2	1	3	5	2	8	9	10	4	9	8	13	1	1	14	10	19	10	11	18	15	7	6
20	45	70	95	1	1	3	2	5	4	1	3	8	1	3	8	6	6	9	5	7	13	4	15	1	7	22	15	21
21	46	71	96	1	1	1	2	5	1	7	2	3	2	1	11	4	7	5	3	2	1	3	12	18	5	19	14	9
22	47	72	97	1	2	1	3	1	3	2	6	2	1	8	7	1	4	2	11	8	2	17	4	17	21	16	3	5
23	48	73	98	1	2	3	4	2	2	6	7	7	8	3	4	9	3	6	2	11	11	16	2	8	11	23	6	22
24	49	74	99	1	1	2	1	4	6	3	5	5	3	1	5	13	1	14	8	14	6	15	9	14	3	6	9	17
25	50	75	00	1	1	2	3	3	2	4	6	4	7	5	3	12	12	12	4	6	2	17	11	2	12	4	8	10

2.1.6. WEIGHTING PROCEDURES FOR THE FINSCOPE SURVEY 2020

The FinScope Survey 2020 is designed to represent the current household-based population of Rwanda. As described in, a stratified multi-stage sample design was used for the FinScope Survey, based on the NISR 2012 Rwanda Census frame.

The weights for the FinScope Survey 2020 will be calculated based on the probabilities of selection from each sampling stage. In this case the number of sample clusters in each district corresponds to the number of clusters enumerated. This will ensure that the data will be weighted up to represent the total household-based population in Rwanda.

Given the stratified multi-stage sample design based on the 2012 census frame, the overall probability of selection for sample households in the sample villages for FINSCOPE can be expressed as follows:

$$p_{hi} = \frac{n_h \times M_{hi}}{M_h} \times \frac{m_{hi}}{M'_{hi} * L}$$

where:

p_{hi} = probability of selection for the sample households interviewed in the i^{th} sample village for the FinScope Survey in district h

n_h = number of sample villages selected in district h for the 2012 Rwanda Census frame

M_{hi} = total number of households in the 2012 Rwanda Census frame for the i^{th} sample village in district h, used as the measure of size (MOS)

M_h = total number of households in the 2012 Rwanda Census sampling frame for district h

m_{hi} = number of sample households selected in the i^{th} sample village in district h (that is, 9 for Kigali Province and 12 for the other provinces)

M'_{hi} = total number of households listed in the i^{th} sample village or segment in district h

L = Total Number of persons in the household with at least 16 years and above

Each component of this probability of selection corresponds to an individual sampling stage. The basic sampling weight is calculated as the inverse of this probability of selection. Based on the previous

$$W_{hi} = \frac{M_h \times M'_{hi}}{n_h \times M_{hi} \times m_{hi}} * L,$$

expression for the probability, the basic weight can be simplified as follows:

where:

W_{hi} = basic weight for the sample households in the i -th sample village in district h for the FINSCOPE Survey data.

Generally it is necessary to adjust the weights to take into account the non-interview households in each sample village. However, if all of the non-interview households are replaced during the FINSCOPE Survey data collection in the sample villages, the final number of completed households will be exactly 16 for each sample village. In this case there is no need to adjust the weights for nonresponse.

2.2. SURVEY IMPLEMENTATION

2.2.1. SURVEY INSTRUMENT

The FinScope Survey is conducted face-to-face using a structured questionnaire (with mainly closed questions – *see Annex*) which takes, on average, approximately one hour and a half to administer.

CESS will work closely with the AFR/FinMark Trust research team to adapt and refine the FinScope Customer Survey 2020 questionnaire to take into account changes and developments in the financial sector since the FinScope Survey 2016, at the same time ensuring that the questionnaire includes core questions to enable comparison with the 2008 and 2012 FinScope findings as well as cross-country comparisons.

The modules of the questionnaire to be collected in the FinScope Customer Survey 2020 are as follows:

- Module A Localization and Identification of the Household
- Module B Household Register
- Module C Household Information and Demographics
- Module D Access to Infrastructure
- Module E Financial Capacity
- Module F E-Payments and Mobile Money
- Module G Money Management – Saving/Investment
- Module H Money Management – Borrowing
- Module I Money Management – Risk and Risk Management
- Module J Money Management – Remittances
- Module K Banking
- Module L Informal Products
- Module M Farming
- Module N Income and Expenditures
- Module O General Information

The survey instrument has been translated into Kinyarwanda, and is attached as part of this Inception Report. Data will be collected using GSM enabled android tablets, however, a paper-based questionnaire will also be implemented in-country during the pre-test and training sessions to ensure that the questionnaire and the translation can be clearly understood.

2.2.2. LOGISTICS AND SUPPLIES

The CESS Field Manager will be responsible for making logistical arrangements for the field teams. These include ensuring the availability of working vehicles to transport the field teams within and between clusters, providing advances to field staff to cover field expenses, providing alternative sources of electrical supply to charge tablets, addressing any emergency needs that arise during field work, and ensuring the security of field teams. CESS will follow its standard procedures for providing this logistical support. All field teams will be supplied with the following:

Fieldwork documents:

- Interviewer's Manual
- Maps and lists of selected households for all clusters in the assigned area
- Letters of introduction
- Translated questionnaires and additional questionnaires for use in emergency
- Supervisor Control Sheets

- Interviewer Control Sheets
- Household roster forms

Supplies:

- Clipboards, briefcases, backpacks
- Identification for the interviewers
- Paper clips, scissors, string, staplers and staples, tape, pens and pencils
- Tablet devices (pre-configured) with updated survey questionnaire for interviewers
- Equipment for ensuring tablets are charged at all times
- Waterproof containers and envelopes to store paperwork and, if appropriate, completed questionnaires
- Cell phone with SIM card and charger
- Internet transmission router devices (in-case tablet onboard GSM antenna fails)

2.2.3. DATA ENTRY PROGRAMMING AND TESTING

CESS will capture survey data on GSM android tablets, the data entry program used is CSPro. Data entry programming and testing is a multi-stage process that starts approximately a few months prior to field work. The CSPro programmed instrument will be tested, and, if changes are required, the specifications, program and codebook will be modified until the programmed instrument passes testing and is agreed upon with the AFR/FinMark team.

The above mentioned version will then be translated to Kinyarwanda to be used during the training of trainers (ToT) which will be followed by a pre-test exercise including data transmission to CESS servers and generation of the QC reports will enable us to filter out any errors and bottlenecks in the whole system. Furthermore a pilot survey will be carried out after the interviewers training and will give us a second tier opportunity to refine any issues we may have encountered in the pre-test. To address any errors found at these levels we will revise the programming specifications, programming, and the codebook, and we will retest the program until it passes the testing procedures. The final revised program will be available for download from CESS's web server and loaded onto all of the tablets by the IT Specialist at the express instruction of the Survey Director after agreement and discussion with AFR/FinMark team. Hence CESS will share with AFR/FinMark team two versions of the CAPI program for comments and feedback before the ToT and the second one before the data collection.

2.2.4. PRE-FIELD ACTIVITIES

Three major activities will be completed for each cluster prior to fieldwork: community sensitization, household listing, and household selection. CESS will send an advance team to each cluster to complete the pre-fieldwork activities. The advance team will comprise an experienced field supervisor and a lister/cartographer.

Community Sensitization

The advance team will meet with the village head to explain the purpose of the survey and to request community cooperation. The advance team will provide the village head with a letter from MINECOFIN describing the survey and the benefits that will accrue to the country and community from survey findings, and a copy of NISR Visa authorizing CESS team to collect data in the selected clusters.

While in the community and surrounding area, the advance team will identify options for accommodation and meals, and ascertain availability of electricity and internet access in the area.

Household Listing Operation

The main objective of the listing process is to help establish an updated household sampling frame which would be used to sample the households for interviews as well as for weighting purposes at household level and at adult individual level. Therefore, the household listing operation will consist of listing all the households within each sample village and collect the following information:

- The name of the head of the household and other contact details;
- The size of the household;
- The number of adults (aged 16 and above);
- The total population of the sample village.

A 'household listing form' will be designed containing the above required information. The household listing operation is expected to last for a total of 13 days. Thirty (30) listing agents under the supervision of 5 listing coordinators will be recruited among the best ones who did the household listing for the previous CESS's large-scale surveys, and will be clearly briefed on how to use the listing form. Each listing agent will be assigned the household listing of all sample villages in one district, in respect of boundaries of the village using EAs maps of the 2012 Census as provided by NISR. The name of the household head will also be recorded for each household using the register of households kept and 'updated' by the head of village (umudugudu). The names will allow the identification of the sample household during data collection.

Upon receipt of complete listing information for a selected EA, CESS headquarter staff will enter the information into an excel spreadsheet, which will be encrypted and sent through a secure file transport protocol to a dedicated CESS server.

Selection of Sample Households within a Sample Village

To overcome the fact that the information kept in the village chief's register is not always up-to-date, precautions will be taken to select 24 households in each sample village, of which 16 will be surveyed and 8 will be replacement households.

Once listing information from all EAs (villages) has been received by CESS, the CESS statistician will implement the following household selection procedure:

- All the households in occupied housing units will be assigned a serial number from 1 to M_{hi} , the total number of households listed in a village.
- To obtain the sampling interval for the selection of households within the sample village (I_{hi}), M_{hi} will be divided by 24, and maintain 2 decimal places.
- Select a random number (R_{hi}) with 2 decimal places, between 0.01 and I_{hi} .
- The sample households within the sample village will be identified by the following selection numbers:

$$S_{hij} = R_{hi} + [I_{hi} \times (j-1)], \text{ rounded up,}$$

Where $j = 1, 2, 3, \dots, 24$

The j^{th} selected household will be the one with a serial number equal to S_{hij} .

The final lists of randomly selected households along with cluster and household identification numbers will be sent to the Field Manager, who will assign clusters and provide the lists of selected households in those clusters to the Field Supervisors. The lists of selected households will be used in field management tasks, and will be programmed into the CSPro instrument loaded onto each interviewer's tablet computer.

2.2.5. TRAINING, PRE-TEST AND PILOT

Training, pre-test and pilot activities will occur over a five week period preceding the start of fieldwork, as follows:

- Weeks 1-2: Training of trainers, field supervisors, and editors, including pre-testing the data entry program, data transmission, and data receipt and quality control (QC) procedures.
- Weeks 3-4: Training of interviewers
- Week 5: Pilot

Training of Trainers

In weeks 1 and 2, the AFR and FinMark Trust will work with the CESS to train the QC staff selected as trainers for the main field staff training; these staff will also serve as rotating Quality Control and Support team members (QCS). To the extent allowed by the structure and standard procedures of the CESS, Editors, Field Supervisors and Editors will be trained alongside the QCS. Training will be based on both the Interviewer's and the Supervisor's Manuals, and will cover:

Introduction to the survey: survey objectives, sample, survey modules, survey implementation, confidentiality, field supervisor role.

Preparing for fieldwork: collecting materials, monetary advances for field expenses, arranging transportation and accommodations, contacting local authorities.

Questionnaire content: location identifiers, household roster, survey modules details.

Organizing and supervising fieldwork: assigning households to field teams and tracking completion, observing interviews, monitoring and evaluating interviewer performance, systematic spot checking of household composition, reducing non-response, maintaining motivation and morale, completing work in a cluster.

Data management: checking questionnaires for completeness and correct identifiers, archiving data, backing up files, transmitting data.

Reporting/communications: schedule and procedures for reporting to the Field Manager and issues that require immediate communication.

There will be hands-on training and practice sessions for the use of all technical equipment required for survey implementation, including tablet computers.

Pre-Test

Towards the end of the first week of training of trainers, CESS will conduct a pre-test of the programmed survey instrument. The pre-test will be conducted in rural areas near the training site, and will include individuals who are similar to the planned survey respondents. The pre-test will focus on the survey instrument – whether the flow between modules works well, whether all questions are comprehended,

and whether the full range of appropriate responses are available. (Note these issues will have been first considered during the initial pre-test of the hard copy questionnaire and translations). Simultaneously, the pre-test will identify any problems with the translations and with using the tablet (e.g., skip patterns, navigation between modules).

Any issues with the survey instrument and program will be communicated to the CESS Data Manager, who will see that corrections are made, documented, and tested during the second half of the supervisor's training.

As soon as the survey instrument has been corrected, the revised version will be translated. As soon as the revisions to the program have passed testing, the revised program will be downloaded from CESS's servers and loaded onto all of the tablets by the supervisory staff of the survey organization, at the express instruction of the Survey Director.

The pre-test also will entail testing data transmission, extraction and generation of QC reports at CESS. The CESS Data Manager will closely monitor the success of these systems, procedures, and activities and have any issues resolved.

The IT Specialist will review procedures for addressing issues identified in the QC reports with the Data Manager.

Training of Interviewers

In weeks 3 and 4, the AFR and FinMark Trust will work with the CESS training team to train the Interviewers. Training will be based on the interviewer's manual and will cover:

Introduction to the survey: survey objectives, sample, survey modules, survey implementation, confidentiality, interviewer's role.

Conducting the interview: approaching the household, ensuring privacy, asking questions, differences between the printed questionnaire and the tablet screens.

Questionnaire content: location identifiers, household roster, survey modules details.

Fieldwork procedures: field team members' roles and responsibilities, reporting to the field supervisor, ensuring high data quality.

Entering and managing data on the tablet: tablet and screen components, starting a record on the tablet, general navigation, advancing through modules and groups, entering responses.

Completing modules: general instructions, how to administer each module/ask questions/enter responses (question by question).

Hands-on training: Hands-on-training with survey instrument on tablets complete with mock interviews and practice sessions and the use of all technical equipment required for survey implementation.

Pilot Test

At the conclusion of the interviewers' training, the entire field team will conduct a pilot test of all survey procedures, logistics, systems, the revised instrument, and the translations. The pilot test will be conducted in urban and rural areas that are not part of the sample. The pilot test will last about one week.

At the end of each day, everyone participating in the pilot test will meet to discuss issues and challenges and to identify solutions. Proposed solutions will be tested on subsequent days.

At the conclusion of the pilot, all proposed changes to the survey instrument, translations, procedures, logistics, and systems will be documented and prioritized. The AFR and FinMark Trust will work with the CESS Survey Director, Field Manager and QCS specialists to revise the survey instruments.

Proposed revisions to the survey instrument and data entry program will be communicated to the Data Manager, who will coordinate implementation, documentation, and testing of the final changes. The IT Specialist will ensure the survey instrument, translations, and translated data entry program labels align. Revisions to the instrument and data entry program will take several days, so there will be a hiatus between the pilot and the initiation of field work. Once the program has passed testing, the revised program will be downloaded from CESS's servers and loaded onto all of the tablets by the supervisory staff of the survey organization, at the express instruction of the Survey Director.

2.2.6. FIELDWORK

This section describes how fieldwork will be implemented.

Team Structure

Each field team deployed will comprise one Field Supervisor and five Interviewers. Each field team will have its own vehicle.

Field Support

Each field team will be visited regularly by a field QCS team. The field QCS team will ensure that field teams have the supplies that they need and that any problems in the field needing support from the central administration are dealt with promptly. They will provide also moral support to the teams, and provide an additional layer of field supervision and quality assurance.

Field Quality Assurance Systems

- ***Remote Supervision and Monitoring of Progress***

CESS will use two quality assurance systems to ensure documentation of sample completion and the quality of data entry. These are a data management system and QC reports.

The data management system will combine case and data management systems as traditionally used in surveys. It will be used to assign and track completion of selected households (i.e. cases) in each cluster. The Field Manager will provide lists of selected households to the Field Supervisor that includes all of the households selected for interviewing in the cluster. The Field Supervisor will assign cases to interviewing teams from among these selected households. The Field Supervisor will review household records in the interviewing teams' tablets to verify that all appropriate modules have been completed, that the location identifiers are accurate, and that the identifiers for eligible respondents are correct and consistent across all modules. The Field Supervisor will send field teams back to households to complete or correct interviews as necessary.

QC reports will be generated by CESS using aggregated data. QC reports will identify data collection problems at the interviewer, team, and cluster level. The QC reports will allow the Field Supervisor to

evaluate his/her team's performance in terms of response rates, missing data, outliers, age displacement, and value heaping.

- ***Field Supervision***

Rigorous field supervision will be provided throughout the course of fieldwork by several layers of supervisory staff in order to ensure the quality of the data. The front line for data quality assurance in the field will be the Field Supervisors. The Field Supervisor will observe interviews conducted by interviewers. The Field Supervisor will review each questionnaire summary closely prior to the transmission of the data. The Field Supervisors also will observe all interviewers as they conduct some interviews, spot check a random sample of interviewed households, and provide additional instruction to Interviewers as needed. Field QCS teams will visit the field teams during the course of fieldwork to provide supervision and additional quality assurance.

Data Transmission

Once the Field Supervisor has completed a final review of the questionnaire, he will send data from the tablet to a web server at CESS, where all survey data are stored. Data transmission will be accompanied by a report listing all data being transmitted. During transmission, data will be protected by sending encrypted files over secure channels to a secure server using GSM technology. The Field Supervisors will gain experience transmitting data from the tablets to the web server during the trainings.

Problems can occur during the process of transmitting data from the field that can prevent successful transmission, such as low Internet bandwidth or problems on the tablets, including damaged tablet devices and screens. A number of procedures will be in place to address these challenges. Regarding internet access, the Survey Director will work closely with the IT Specialist to identify the most reliable approaches to accessing the internet, as well as several back-up methods, to ensure frequent and regular submission of data from the field.

Damaged tablets will be sent back to CESS for data extraction. The IT Specialist will make extensive efforts to recover data from any tablets that were damaged; these data will then be subjected to additional testing processes.

2.2.7. DATA MANAGEMENT

Receipt of Data

Data will be received on a daily basis from the field on a secure web server at CESS. A report will be generated of the data received that will be compared with a field report of data sent. On a daily basis, the Editors will review the report from the field against the report generated with data on the CESS server.

Discrepancies in these reports will be noted and sent for review to the Data Manager, the Survey Director and other team members as appropriate. The Editors will work with the Data Manager to review and, where possible, address the discrepancies in household records received.

Quality Control

Computerized QC reports will be generated on data received by CESS and will check value ranges, skip patterns and consistency across variables; identify missing data, outliers, heaping, and age displacement; and calculate response rates. Of particular interest will be checks of household and respondent identifiers, in order to ensure that data can be linked across modules. The Editors will review QC reports generated

on data received on a daily basis. Key issues will be identified and noted on the reports, which will be sent to the Survey Director and the Data Manager.

The Survey Director will work with the Field Manager to ensure re-training to address other issues, where indicated.

2.2.8. CALCULATION OF RESPONSE RATES AND WEIGHTS

Weighting Procedures

The basic weight for each sample household would be equal to the inverse of its probability of selection calculated by multiplying the probabilities at each sampling stage. Since all survey data will be processed by computer, it will be easy to attach a weight to each sample household record in the computer files, and the tabulation programs can weigh the data automatically. The sampling probabilities at each stage of selection will be maintained in an Excel spreadsheet with information from the sampling frame for each sample village so that the corresponding overall probability and corresponding weight can be calculated.

The overall probability of selection for sample households in FinScope Survey 2015 can be expressed as follows:

$$p_{hi} = \frac{n_h \times N_{hi}}{N_h} \times \frac{m_{hi}}{M_{hi}} \times \frac{1}{y_{hij}},$$

Where:

p_{hi} = probability of selection for the sample households in the i^{th} sample village in stratum (district) h

n_h = number of sample villages selected in stratum h

N_h = total number of households in the sampling frame of villages for stratum h

N_{hi} = total number of households in the frame for the i^{th} sample village in stratum h

m_{hi} = number of sample households selected in the i^{th} sample village in stratum h (10 for each sample village)

M_{hi} = total number of households listed in the i^{th} sample village in stratum h

y_{hij} = total number of household eligible members in the i^{th} sample village in stratum h

The two components of this probability of selection correspond to the individual sampling stages.

The basic sampling weight is calculated as the inverse of this probability of selection. The weight can be simplified as follows:

$$W_{hi} = \frac{N_h \times M_{hi}}{n_h \times N_{hi} \times m_{hi} \times y_{hij}},$$

Where:

W_{hi} = basic weight for the sample households in the i^{th} sample village in stratum h

Calculation of Survey Estimates

The survey estimate of a total can be expressed as follows:

$$\hat{Y} = \sum_{h=1}^L \sum_{i=1}^{n_h} \sum_{k=1}^{m_{hi}} W_{hi} y_{hij} ,$$

Where:

L = number of strata (districts) in the domain

y_{hij} = value of variable y for the j^{th} sample household in the i^{th} sample village in stratum h

The survey estimate of a ratio is defined as follows:

$$\hat{R} = \frac{\hat{Y}}{\hat{X}}$$

Where \hat{Y} and \hat{X} are estimates of totals for variables y and x, respectively, calculated as specified previously.

Sampling Errors Calculation

It is important to include a statement on the accuracy of the survey data in the publication of the survey results presenting tables with calculated sampling errors and confidence intervals for the most important survey estimates as well as the different sources of non-sampling error. The standard error, or square root of the variance, is used to measure the sampling error. The variance estimator should take into account the different aspects of the sample design, such as the stratification.

The cluster variance estimator of a total can be expressed as follows:

$$V(\hat{Y}) = \sum_{h=1}^L \left[\frac{n_h}{n_h - 1} \sum_{i=1}^{n_h} \left(\hat{Y}_{hi} - \frac{\hat{Y}_h}{n_h} \right)^2 \right],$$

where:

$$\hat{Y}_{hi} = \sum_{j=1}^{m_{hi}} W_{hi} y_{hij}$$

$$\hat{Y}_h = \sum_{i=1}^{n_h} \hat{Y}_{hi}$$

The variance estimator of a ratio can be expressed as follows:

$$V(\hat{R}) = \frac{1}{\hat{X}^2} \left[V(\hat{Y}) + \hat{R}^2 V(\hat{X}) - 2 \hat{R} COV(\hat{X}, \hat{Y}) \right],$$

Where:

$$COV(\hat{X}, \hat{Y}) = \sum_{h=1}^L \left[\frac{n_h}{n_h - 1} \sum_{i=1}^{n_h} \left(\hat{X}_{hi} - \frac{\hat{X}_h}{n_h} \right) \left(\hat{Y}_{hi} - \frac{\hat{Y}_h}{n_h} \right) \right]$$

$V(\hat{Y})$ and $V(\hat{X})$ are calculated according to the formula for the variance of a total.

3. ANALYSIS PLAN & INDICATORS

4.1. ANALYZING FINANCIAL INCLUSION (Analysis plan)

a. Financial inclusion

The concept '*financial inclusion*' is core to the FinScope methodology. Based on financial product usage, the adult population is firstly segmented into two groups: the '*financially excluded*' and the '*financially included*':

Financially excluded individuals are those who manage their financial lives without the use of any financial products or mechanisms external to their personal relationships. If they borrow, they rely on family/friends; and if they save, they save at home.

Financially included individuals are those who have/use formal and/or informal financial products and mechanisms. **Note:** That does not mean that these individuals have the products in their name. They could also, for example, use someone else's bank account or be covered by some else's insurance. That includes following indicators:

- **Formally served:** Individuals who have or use products or services from financial institutions that are regulated through an Act of law (formal financial institutions).
- **Informally served:** Individuals who have or use products or services from financial institutions that are not regulated (informal financial institutions and mechanisms) and/or use community based organisations/mechanisms to save or borrow money.
- Those individuals who have or use **both** formal and informal products and services.

Types of financial services: Financial services may be provided formally or informally. Formal financial services are those offered by government regulated financial institutions such as commercial banks, insurance companies, and microfinance institutions. As such, it includes banking products (e.g. bank accounts, debit and credit cards, home loan from a bank), as well as products/services offered by other formal non-bank institutions (e.g. education policy, income payment channels such as Western Union, car insurance, medical aid, etc.). Informal financial services are provided by individuals and/or associations which are not regulated by government, such as private money lenders and savings clubs. While it is easy to distinguish whether a financial product/service is formal or informal for the vast majority of products and services, some country-specific differences might occur. Cooperatives, for example, are generally classified as informal. In South Africa however, cooperatives are classified as formal (i.e. Cooperative Bank).

b. Determinant of financial inclusion

Understanding their demographic landscape as well as the realities and challenges that people face in their daily lives is important as it is likely to affect how people interact with financial services. Therefore, it is imperative to measure the following characteristics and socio-economics information of individuals, household and communities in Rwanda.

This section captures basic demographic and socio-economic information of individuals, households, and communities. It looks at who they are (age, gender, geographical distribution), what they have (education, infrastructure), and what they do with what they have (income generating activities, role of money, coping

strategies). All these factors influence the financial lives of people to varying degrees and hence affect financial inclusion.

The rural nature of the population, for example, should be taken into account when considering the overall financial access picture and developing strategies to expand inclusion, as the realities of rural life (e.g. insufficient access to water, sanitation, electricity, physical access to financial services institutions, generally low levels of salaried workers, and higher dependency on irregular income sources such as farming) are important driving forces/barriers to uptake. Note that FinScope uses country-specific classifications for rural and urban areas as provided by the respective national statistics offices.

Low levels of education among the majority of the population also need to be considered when attempting to address issues of financial inclusion. As show here, there is often a direct relationship between education levels as well as financial behaviour and literacy. Further, there is a relationship between education levels, income sources, and levels of income.

In addition to assessing the demographic landscape, it is also important to have a good understanding of what the realities and challenges are that people face in their daily life, e.g. in terms of access to amenities and infrastructure, income and wealth profiles. All of these aspects are likely to affect how people interact with financial services. People who struggle to survive on a daily basis, who do not have access to basic amenities, or who live in an entirely cash-based economy are unlikely to prioritise usage of financial services within their limited means.

Furthermore, it is vital to understand how people generate their income and what the income distribution is. Without knowing the income realities, it will be difficult to understand their financial services usage choices and constraints as income is one of the primary determinants of affordability and, hence, financial inclusion. Understanding the course, regularity and consistency of earned income can also inform the optimal way that financial inclusion services should be structured to unlock usage. This includes:

1. Age
2. Gender
3. Geographical distribution
4. Education levels
5. Sources of income
6. Personal and Household monthly income
7. Infrastructure
8. Housing
9. Agriculture

c. Dimensions of financial inclusion across all types of financial products/services (formal and informal)

Banking, savings and investments, credit and borrowing, remittances, insurance and payments/transactions are some of the financial products and services related to dimensions of financial inclusion. 'Dimensions of financial inclusion' refers to the access methodology (Porteous, 2010) which identifies four dimensions, namely uptake, access, usage, and impact. As the latter two are difficult to

measure with the available FinScope datasets, this book focuses on uptake and access to financial products/services.

This section provides insight into usage/access, attitudes and perceptions regarding financial products and services, including the following:

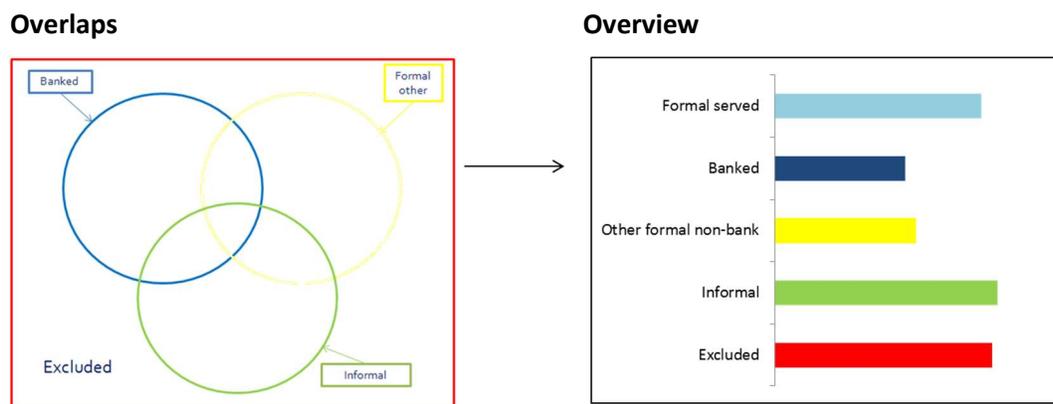
1. Banking penetration
2. Risks and insurance
3. Savings and investments
4. Borrowing and credit/loans
5. Mobile money
6. Financial capabilities
7. Informal mechanism penetration

4.2. FINSCOPE CUSTOMER SURVEY 2020 INDICATORS

FinScope tools: Main analytical tools used here include the Overview, Financial Access Strand and the Landscape of Access.

- i. The **Overview** is a bar graph which depicts the total uptake of different types of financial products/services. As this graph includes the overlaps, it adds up to more than 100%. The Overview illustrates total product uptake, the uptake of savings/investment products/services, credit/loan products/services, insurance products/services, as well as remittance products/services.

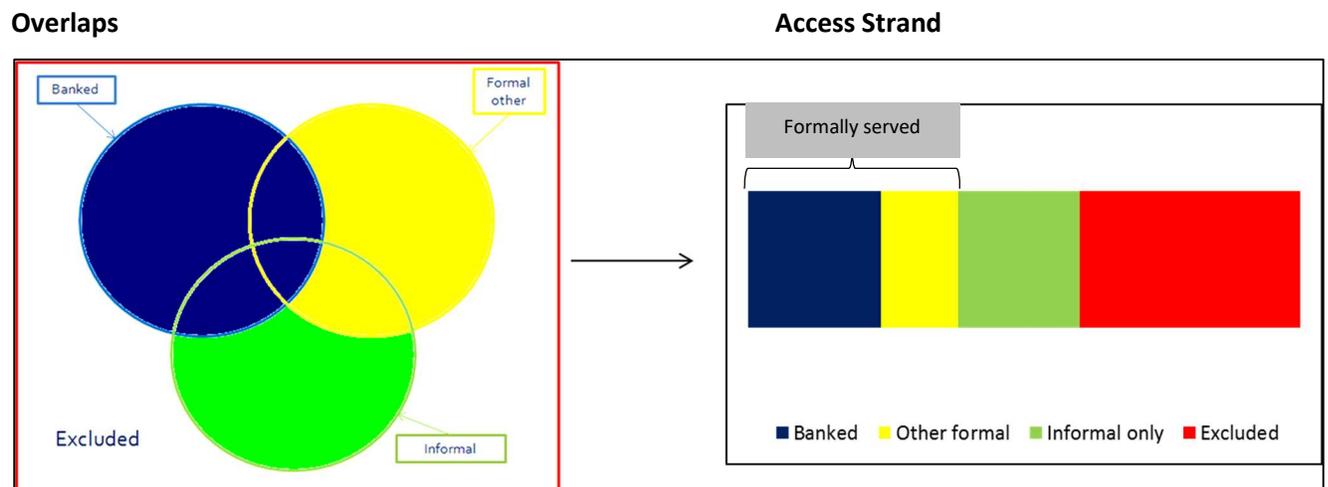
Figure 1: Overview of financial inclusion



- ii. The **Access Strand** is a 100% stacked bar graph which depicts the uptake of different types of financial products/services using a hierarchical approach (without overlaps):
 - The percentage of adults who are banked (**banked**) – identifying adults using commercial bank products. This is not necessarily exclusive usage – these individuals could also be using financial products from other formal financial institutions and/or informal products as well as bank products.

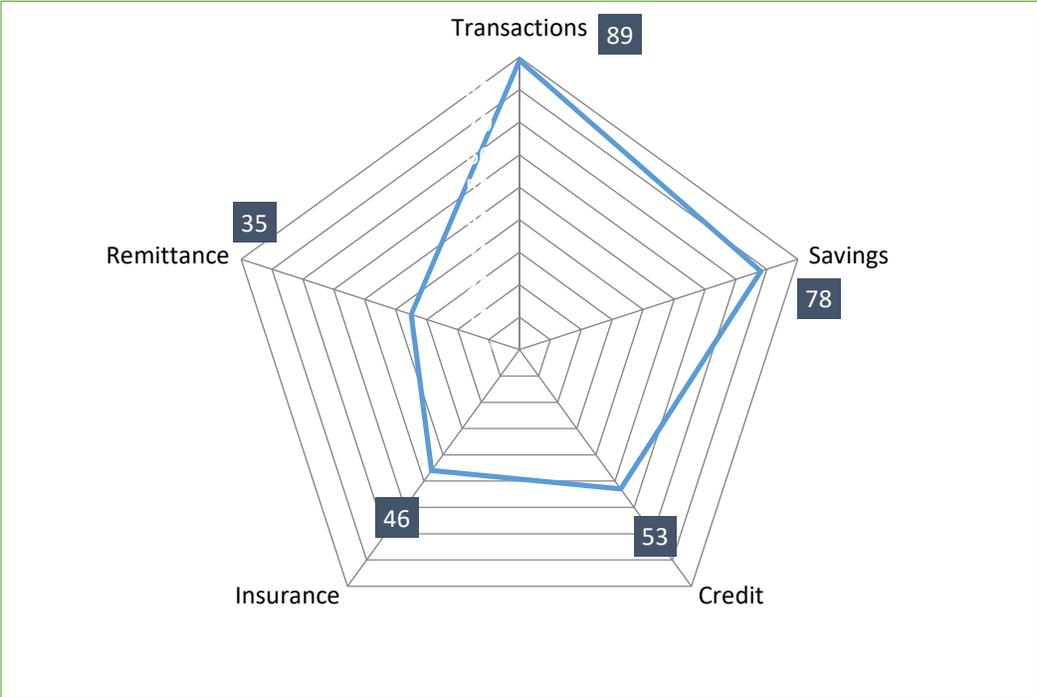
- The percentage of adults who are formally served but who are not banked (***other formal***) – adults using financial products from formal financial institutions which are not commercial banks such as microfinance institutions or insurance companies. This excludes bank usage, but is not exclusive in terms of informal usage – these individuals could also be using informal products.
- The percentage of adults who are not formally served but who are informally served (***informal only***) – adults using informal financial products or mechanisms only. This is exclusive informal usage and does not include individuals who are within the banked or other formal categories of the Access Strand that also use informal services.
- The percentage of adults who are excluded/unserved (***excluded***) – adults who do not use any financial products/services to manage their financial lives – neither formal nor informal and depend only on family/friends for borrowing and save at home if they save.

Figure 2: Overlaps removed through Access strand



- iii. The **Landscape of Access** is used to illustrate the extent to which financially included individuals have or use financial products and services (both formal and informal). The web diagram depicts, on its five axes, the percentage of the financially included adults that have or use:
- **Transactional** products/services: secure mechanisms in which funds can be deposited, transmitted, and withdrawn to meet regular transaction needs, e.g. transaction account
 - **Savings/investment** products/services: mechanisms which are used to accumulate funds for future use (short- and/or long-term), whether it is on a contractual or discretionary basis, e.g. savings account, savings group membership
 - **Credit** products/services: mechanisms which are used for the provision of funds in advance against a committed payment stream. This may be further subdivided into secured and personal (unsecured) credit, e.g. bank loan, house mortgage, loan from an informal money lender, taking goods on credit
 - **Insurance** products/services: mechanisms which are used to cover a certain defined risk event in return for a premium, e.g. life insurance, medical aid, burial society membership
 - **Remittance** products/services: mechanism which is used to remit money (sending/receiving) to or from family members, friends, family etc. – which could be considered as a sub-category of transactional product. Given its importance, however, it is featured separately.

Figure 3: Landscape of Access example



4. IMPLEMENTING ORGANIZATION KEY STAFF AND FIELDWORK ORGANIZATION

5.1 IMPLEMENTING FIRM

CESS will direct field implementation of the FinScope Customer Survey 2020 in Rwanda. Created in 2005, CESS is one of Rwanda's leading providers of surveys and statistics consultancy services, with extensive experience in conducting large-scale household surveys. For the FinScope Customer Survey 2020, CESS will plan and conduct primary data collection, which includes drawing the sample, subcontracting the in-country survey organization, developing the protocol and manuals, training field staff, oversee data collection, and managing data.

5.2 KEY STAFF

The key staff from CESS who are involved in the FinScope Customer Survey 2020 are:

Desire NKEZABAHIZI, PhD

He holds a PhD in Biometrics and Data analysis. He has over 15 years of experience in statistical surveys and censuses, data processing and analysis. As Survey Director, he will oversee administrative and technical activities of the survey.

Prosper NKAKA MUTIJIMA

He holds a Bachelor's Degree in Demography. He has over 30 years of experience in censuses and surveys, and analysis. As Field Manager of the survey, he will be the lead consultant on fieldwork, analysis and reporting activities.

Philippe NGANGO GAFISHI

He holds a Master's Degree in Economic Policy Management and Statistics. He has over 20 years of experience in statistical surveys and analysis. As Statistician of the survey, he will lead sample selection, weighting, data quality control and analysis.

Ananias MUKIZA GICHONDO

He holds a Master's Degree in Economics. He has over 20 years of experience in censuses, statistical surveys and data processing. As Data Manager of the survey, he will be the lead consultant on data processing and analysis.

Mike NDIRURUKUNDO

He holds a Master's Degree in Business and Information Technology. He has over 13 years of experience in managing IT systems, support and training. As IT Specialist of the survey, he will be the lead consultant on development of survey program, training of users and support on tablets.

5.3 FIELDWORK ORGANIZATION

5.3.1 Design fieldwork programme

The design of the programme of allocating enumeration areas (EAs) to survey teams should be done as soon as the enumeration areas are known. The logistics of transporting teams and materials around the country, and allowances for flooding or climatic difficulties should be taken account of.

5.3.2 Listing of households

All households within the boundaries of the enumeration area should be listed using the agreed procedures. All households will be listed – the only exclusions are institutional households (hospitals, schools, monasteries, hotels, prisons etc.) and refugee camps which have been excluded from the coverage of the 2008, 2012, and 2015 FinScope Surveys.

5.3.3 Selection of households

The household selection procedures to be used in the field will be determined by CESS sampling expert. It is recommended that the enumeration areas will be listed prior to the interview of each EA (village) operation by each team, rather than in a single national operation. This is advantageous as the listing will be more up-to-date at the time of enumeration, and so provide more accurate size measures of each area are obtained. In addition selected households will be less likely to have moved and the number of replacements will be reduced.

5.3.4 Survey interviews

Interviews of eligible respondents in the selected households are expected to last for a maximum of 52 days, using 60 Interviewers controlled by 15 Field Supervisors. Each team (5 Interviewers, and 1 Supervisor) will cover 2 Districts and will spend 26 days in each district plus one day of deployment and one day for moving from a district to another.

A data collection schedule will be designed in advance and supervision will be done by Field Supervisors to ensure the quality of collected data. Quality control and support teams (QCS) will visit interviewed households to verify the accuracy of data collected by interviewers. CESS will ensure that the statistics ethic (Confidentiality) is respected in the whole process of the survey as stipulated by the organic law N° 01/2005 of 14/02/2005 on organization of statistics activities in Rwanda, especially in its Chapter VI.

5. WORK PLAN

Table 1: Work Schedule for FinScope Customer Survey 2020

Activity	June-19				July-19					August-19				September-19				October-19				
	W1	W2	W3	W4	W1	W2	W3	W4	W5	W1	W2	W3	W4	W1	W2	W3	W4	W1	W2	W3	W4	W5
1. PREPARATORY ACTIVITIES																						
1.1. Signature of the contract, and Briefing meeting on FinScope Rwanda 2020 Survey																						
1.2. Technical meeting on the questionnaire																						
1.3. Translation of Questionnaire and Instruction manuals into Kinyarwanda																						
1.4. Design of data entry application (data dictionary, template, labels, hints, error messages, values)																						
2. PRETEST & PROGRAMMING																						
2.1. Pretest of survey instruments in the field (questionnaire and other forms)																						
2.2. Review of survey instruments and data entry application																						
2.3. Design and programming of questionnaire in CSPro to be used on Android Tablets with full functionalities, and draft data collection guide																						
2.4. Design and development of backend system to allow synchronization of all collected data for aggregation and data analysis																						
3. INCEPTION REPORT																						
Deliverable No.1	A detailed implementation plan with clearly defined timelines (by the Survey Director)																					
3.1. Submission of Inception report, tools, and work plan to AFR for approval																						
3.2. Meetings with stakeholders																						
3.3. Submission of Survey instruments by AFR to NISR for Visa and Sample																						
3.4. Sample size, Distribution, and Maps provided by NISR																						
Deliverable No.2	A final English questionnaire approved by AFR (by the Survey Director)																					
4. TRAINING																						

Activity	June-19				July-19					August-19				September-19				October-19				
	W1	W2	W3	W4	W1	W2	W3	W4	W5	W1	W2	W3	W4	W1	W2	W3	W4	W1	W2	W3	W4	W5
Deliverable No.3	Procedure enumerator training materials and field manuals (by the Survey Director)																					
4.1. Printing of survey instruments and training manuals for training																						
4.2. Training of trainers (QCS teams, Editors, Field Supervisors)																						
4.3. Selection and training of Interviewers (Interviewers + Backups)																						
5. LISTING																						
5.1. Listing of households (HH) in selected enumeration areas (EAs)																						
5.2. Sampling of HH to be enumerated																						
6. PILOT SURVEY																						
6.1. Pilot survey outside the Selected EAs, Feedback, Review of survey instruments																						
6.2. Printing of survey instruments, and Logistic organization																						
Deliverable No.4	Translated versions of the questionnaire in Kinyarwanda approved by AFR (by the Survey Director)																					
6.3. Finalization of data entry template on the electronic tablets and the synchronization system																						
Deliverable No.5	A final script (approved by AFR) for data capturing devices, and data quality control plan (by the Survey Director)																					
7. FIELDWORK																						
7.1. Deployment of field staff (QCS, Field Supervisors, and Interviewers)																						
7.2. Selection of respondents using Kish grid, Fieldwork data collection, and Overall field supervision and Data quality control																						
8. DATA CLEANING AND DELIVERY OF DATA SETS																						
Deliverable No.6	A comprehensive field report detailing the field process, quality control measures, difficulties encountered, and measures undertaken to address issues experienced (by the Field Manager)																					
8.1. Data cleaning																						
8.2. Merging datasets and final control checks																						
8.3. Reporting																						
8.4. Documentation																						
Deliverable No.7	A cleaned data sets and complete report of the survey (by the Survey Director)																					