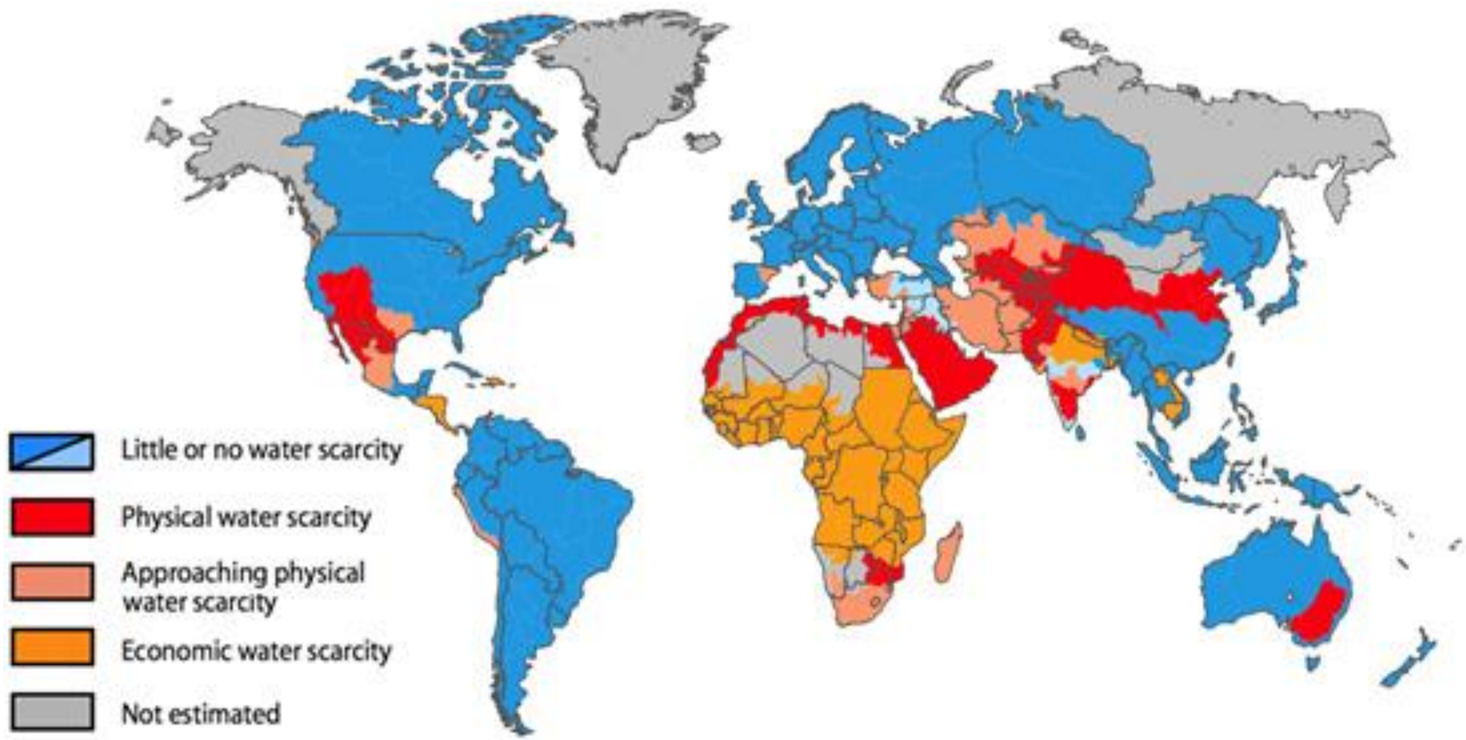
Urban Water Partners

Cameron Bossert ○ Meghan Bridges ○ Will Meneray ○ Brendan Stevens

The Water Imperative



Clean water is essential to health and development,
and yet it is extremely scarce in many parts of the developing world

The Opportunity

Urban Water Partners

Tap | **Vendor** | **Sand Filter** | **Consumer**

Slowsand filtration leverages and enhances current supply chain

The Potential – Return on Equity

Year 1: -55%

Year 2: 450%

Year 3: 650%

Year 4: 1080%

Year 5: 1270%

Seeking $200,000 investment for 20% equity stake

The financial returns exceed those of the previous model, and the social value proposition is much more sustainable

Business Model Alterations

Alterations strengthen the model and create economic and social value

Agenda

1. Industry

2. Old Business Model

3. New Business Model

4. Financials

5. Conclusion


Tanzanian Water Market

Dar es Salaam

- 10% of population has legal connection to water supply
- 25% of water sourced from Ruvu River reaches legally-connected customers
- Culture of water vendors
- Bottled water too expensive for BoP consumers

Dar es Salaam is an optimal starting location for Urban Water Partners

Technology Justification

- Recognized by UEPA and WHO
- Removes many types of contaminants
- Produces water ready to drink
- Limited maintenance and energy input required
- Other water purification methods are expensive, unproven, or insufficient for drinking water

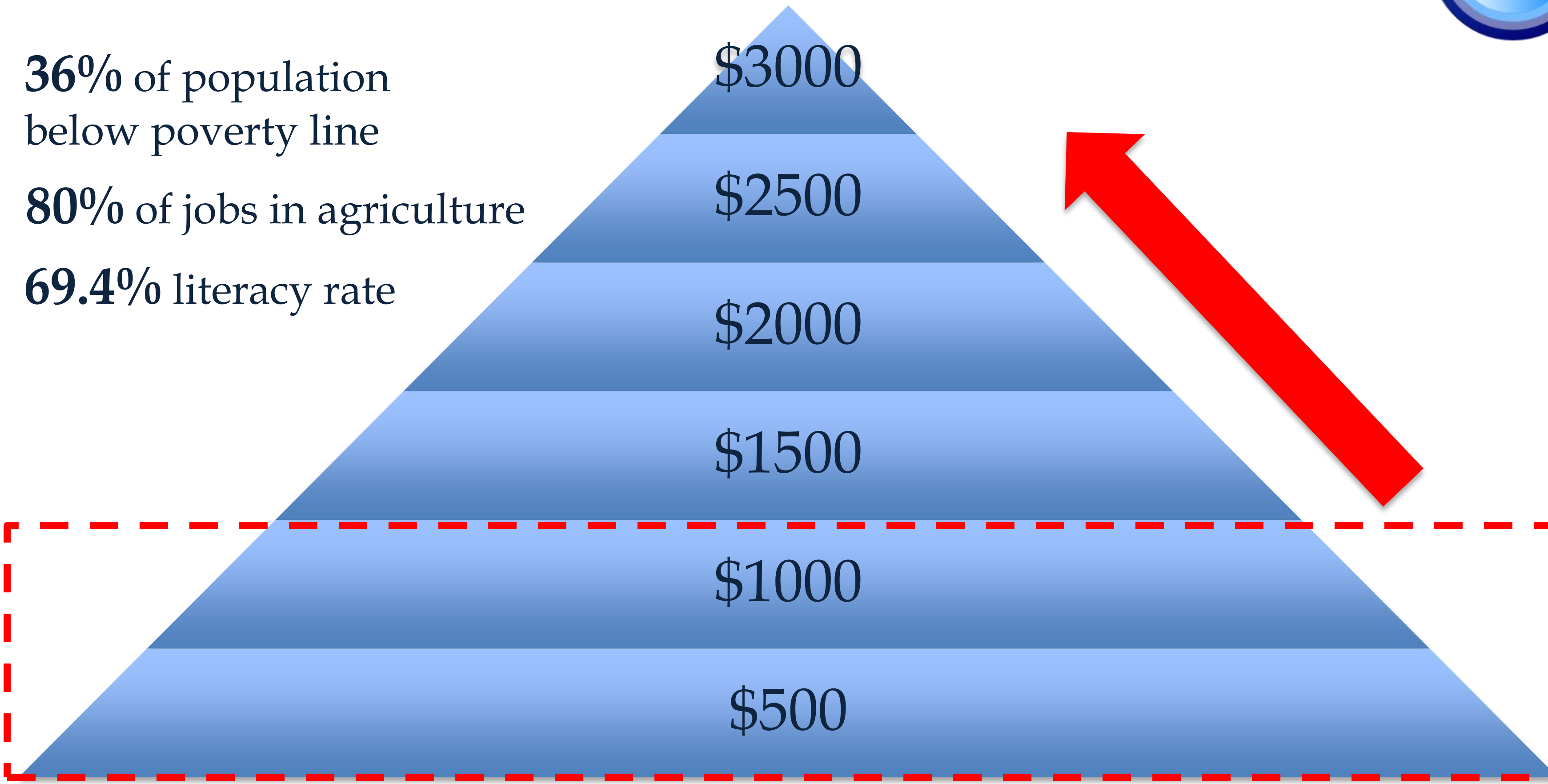
Slowsand water filters is the technology best suited to slums in Dar es Salaam

Consumers

36% of population below poverty line

80% of jobs in agriculture

69.4% literacy rate



There is a significant target market to sell and purchase clean water from UWP

Government Involvement

Regulation

Small business licenses

Illegal taps

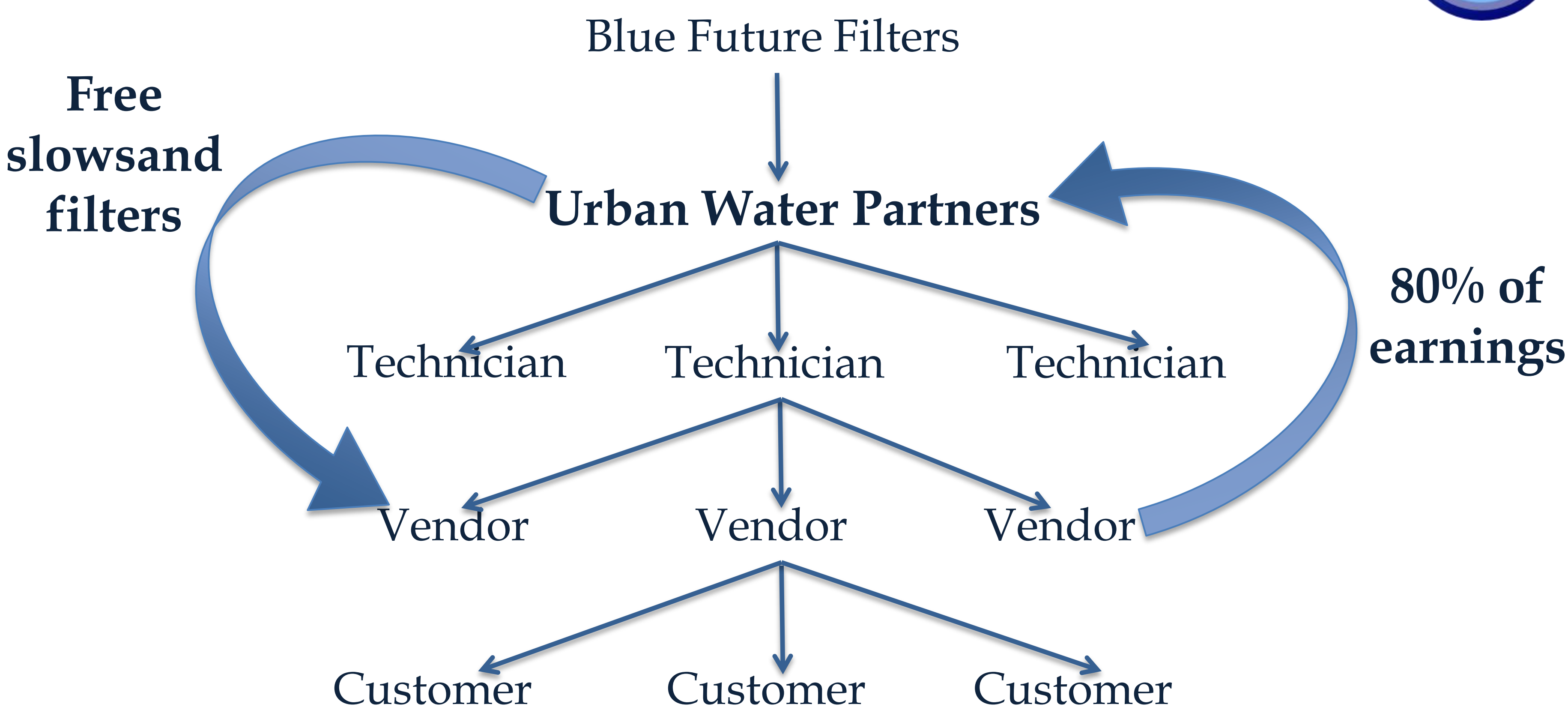
Ban on sachet water

Corruption

UWP must develop and maintain a good relationship with the government

Old Business Model

Original Business Model



Vendors have little accountability to UWP
and no incentive to report earnings accurately

Original Business Model

	Year I	Year I Realistic	Year II	Year II Realistic
# Filters (Vendors)	50	50	2000	1450
Incremental / New Filters	50	50	1950	1400
Underreporting Adjustment	15.0% gross rev	30.0% gross rev	15.0% gross rev	30.0% gross rev
Informal Cost of Doing Business	10.0% gross rev	10.0% gross rev	10.0% gross rev	15.0% gross rev
Cost per Filter	$ 400	$ 400	$ 250	$ 400
# Filters Damaged by Vendors	5.0% filters	20.0% filters	5.0% filters	20.0% filters
Net Income Before Tax	**$ (172,117)**	**$ (207,767)**	**$ 3,679,354**	**$ 1,166,249**
% Change		*21%*		*-68%*

Key Risks:

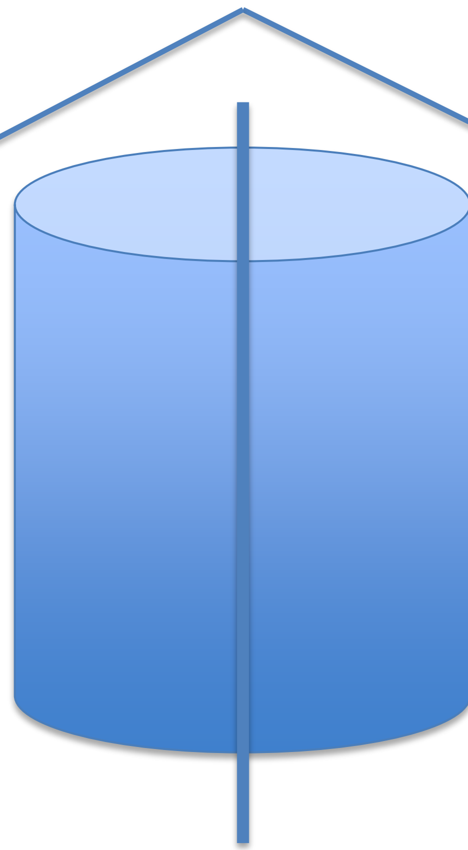
- Speed of rollout vulnerable
- Vendors under-reporting revenue
- Escalation of bribery and corruption
- Manufacturing set-up risk
- Vendor abuse of filters

The original business model imposes significant risks on investors without a sufficient risk mitigation strategy


New
Business
Model

Microfinancing

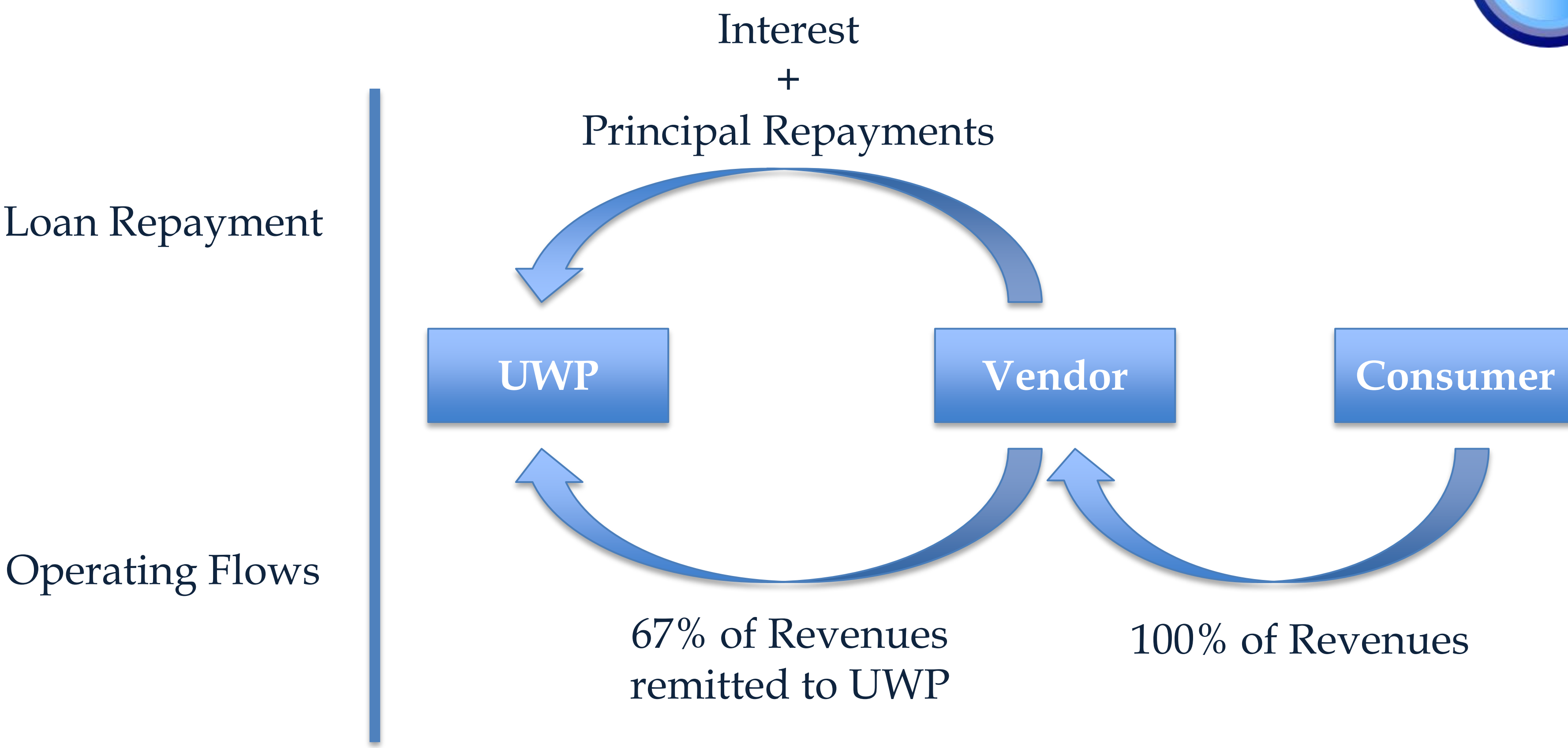
Water Filter = $400



UWP	**Vendor**
Covers $200	**Covers $200**
▪ Lends vendor $200 for remaining purchase price	▪ Groups of 5 women agree to cover each other's loan
▪ Receives interest on principal outstanding	▪ Monthly repayments from water earnings

Accountability and fairness are the central pillars of UWP's business

Revenue Model



Building a Network
Incentives - Vendors

Vendors

- Supplemental income for family
- Minimal cannibalization of husband's business
- Free access to clean drinking water for personal use

Incentives - Government

- Community initiatives to put filters in schools and orphanages will increase buy-in

<u>Government</u>

- Increase in connections to water system
- Delays need for water purification infrastructure
- Reduction in death and disease in urban areas

Incentives – Blue Future Filters

- South African manufacturer Hilfort Plastics can supply plastic jugs

Blue Future Filters

- Creation of a market for targeted product
- Limit risk by focusing on manufacturing
- Iterative approach to product design

Incentives – WaterAid

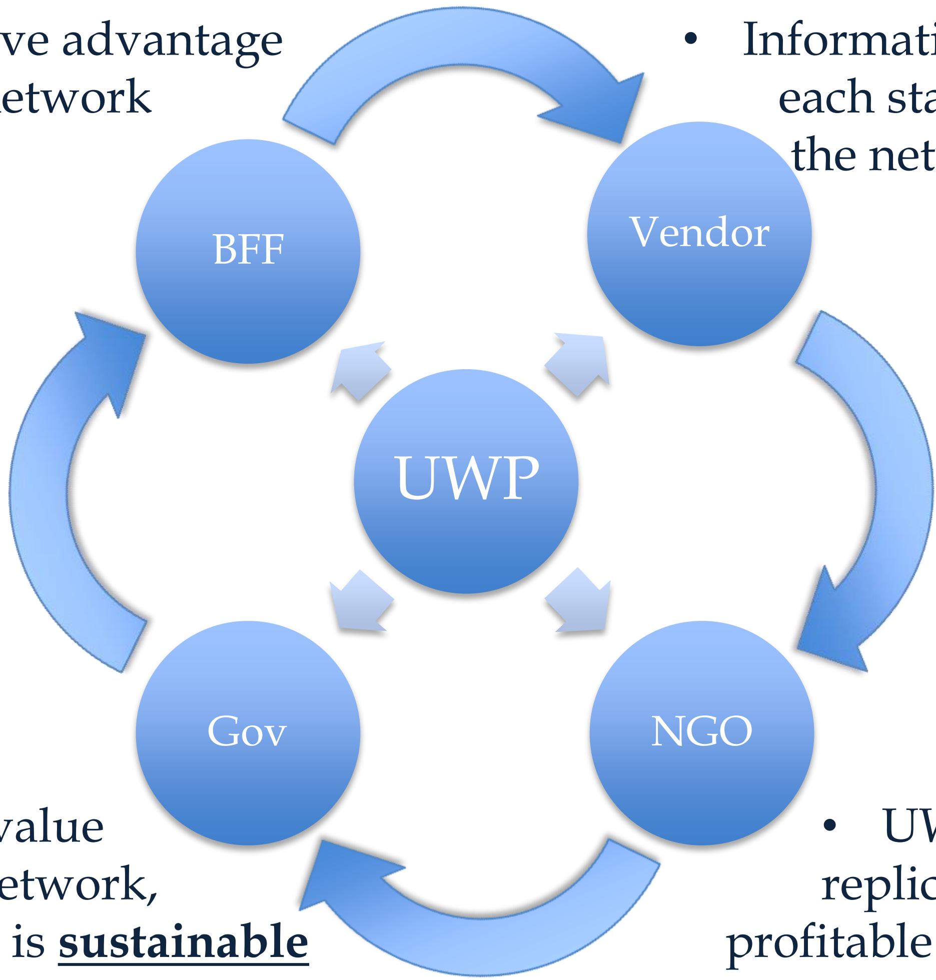
- U.K. based NGO with an annual operating income of £45.6 million

WaterAid

- Amplifies the impact of their expertise
- Limited investment for substantial reach
- Focus on education rather than distribution

Building a Network

- UWP's competitive advantage is its role in the network as a **connector**
- Information flows between each stakeholder to make the network **stronger**

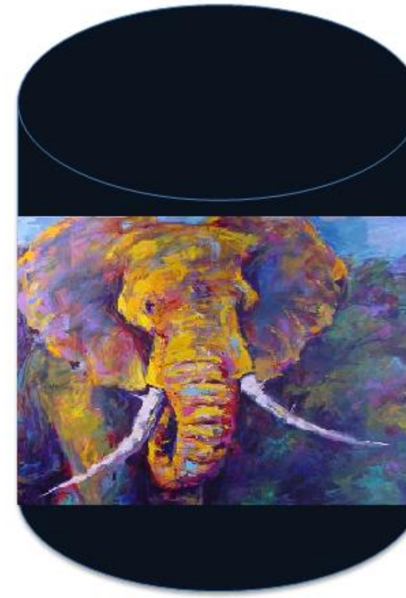


- By sharing the value created in the network, UWP's strategy is **sustainable**
- UWP's strategy is replicable, scalable and profitable in **other markets**

Marketing Plan

UWP-branded water bottles

Mobile phone health surveys

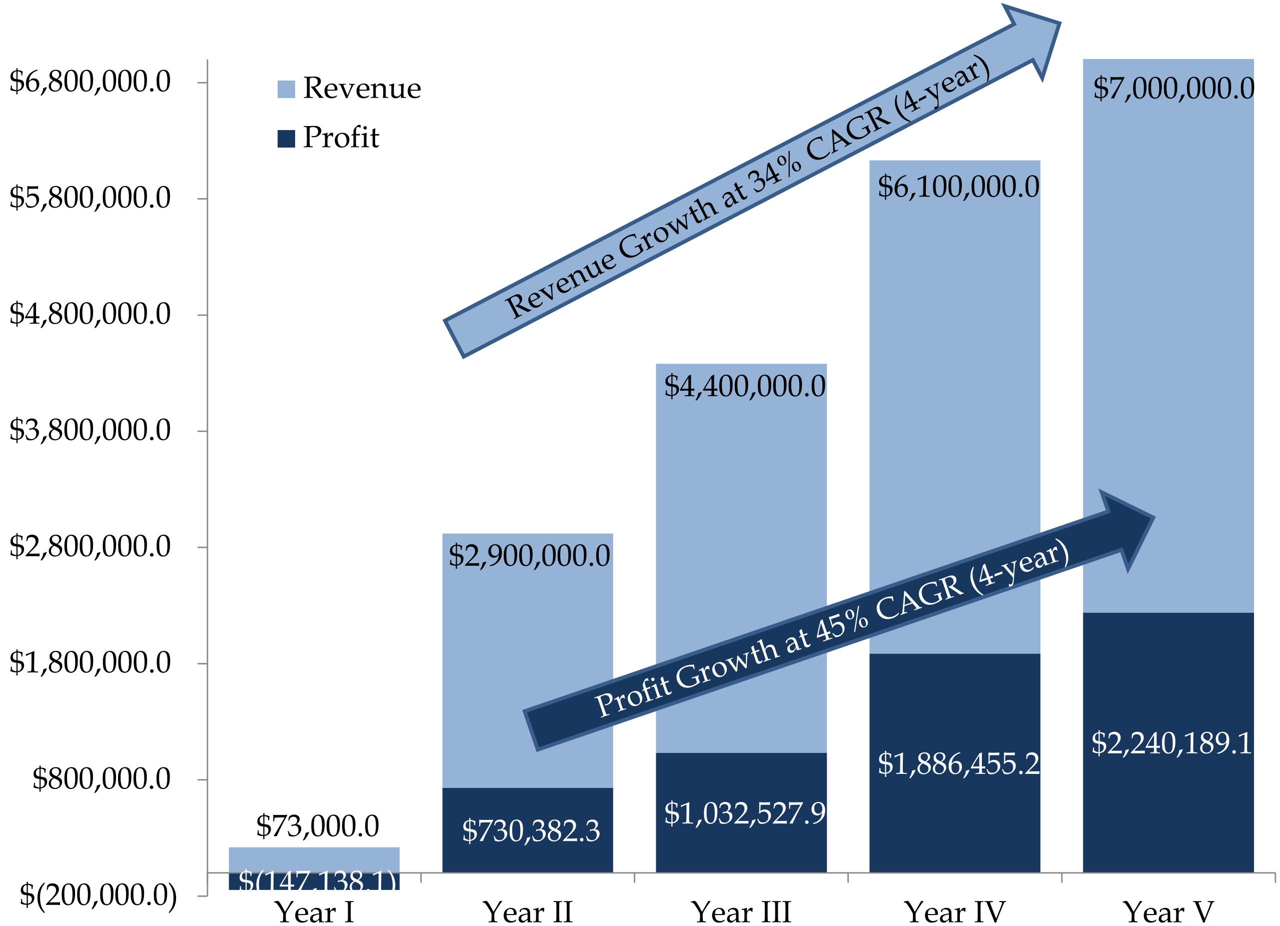


Urban Water Artists

Unique marketing initiatives will distinguish UWP and its water, and help it gain the trust of locals in Dar es Salaam

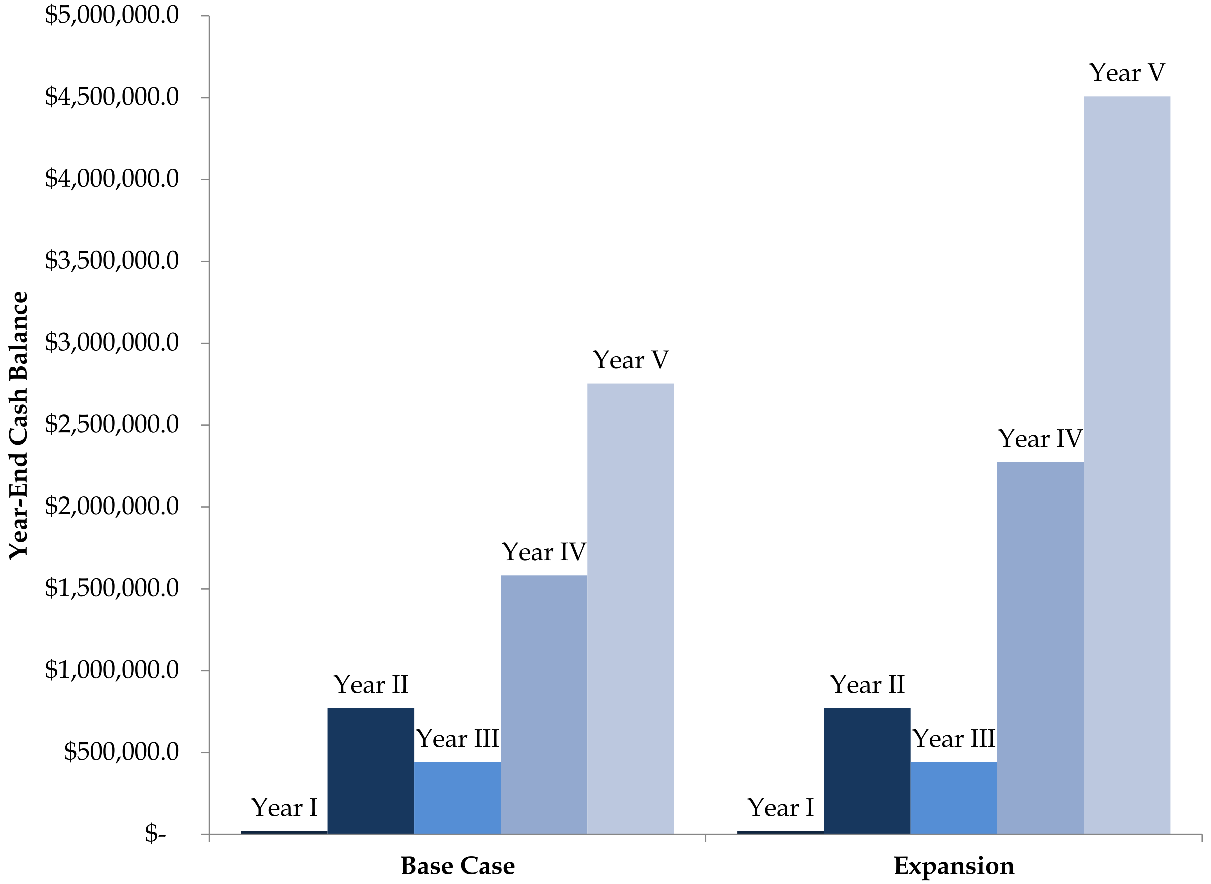
Financial Implications

Revenue and Profit Growth



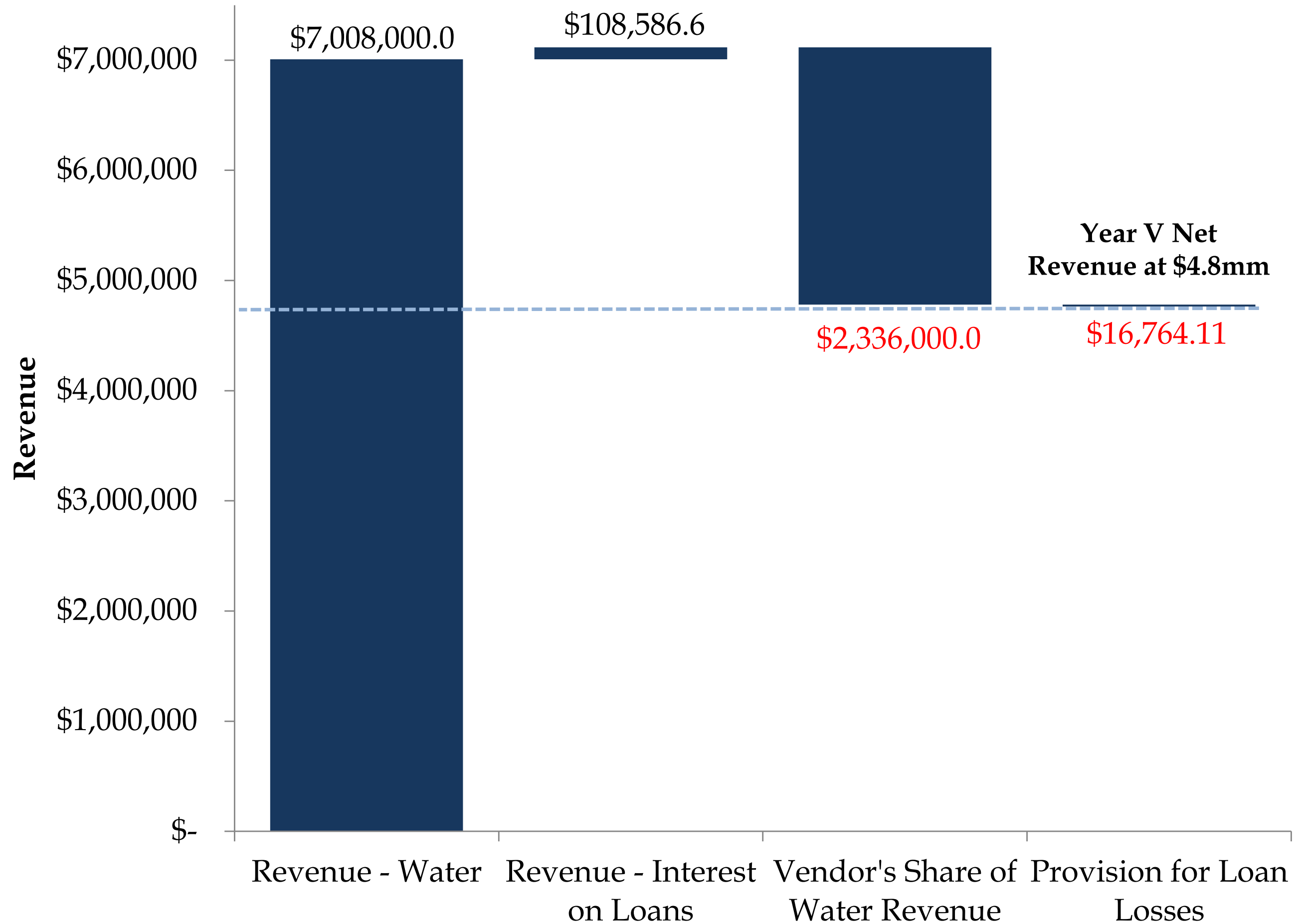
The suggested UWP business model offers substantial opportunities for growth in both the top and bottom lines

Cash Flow Generation



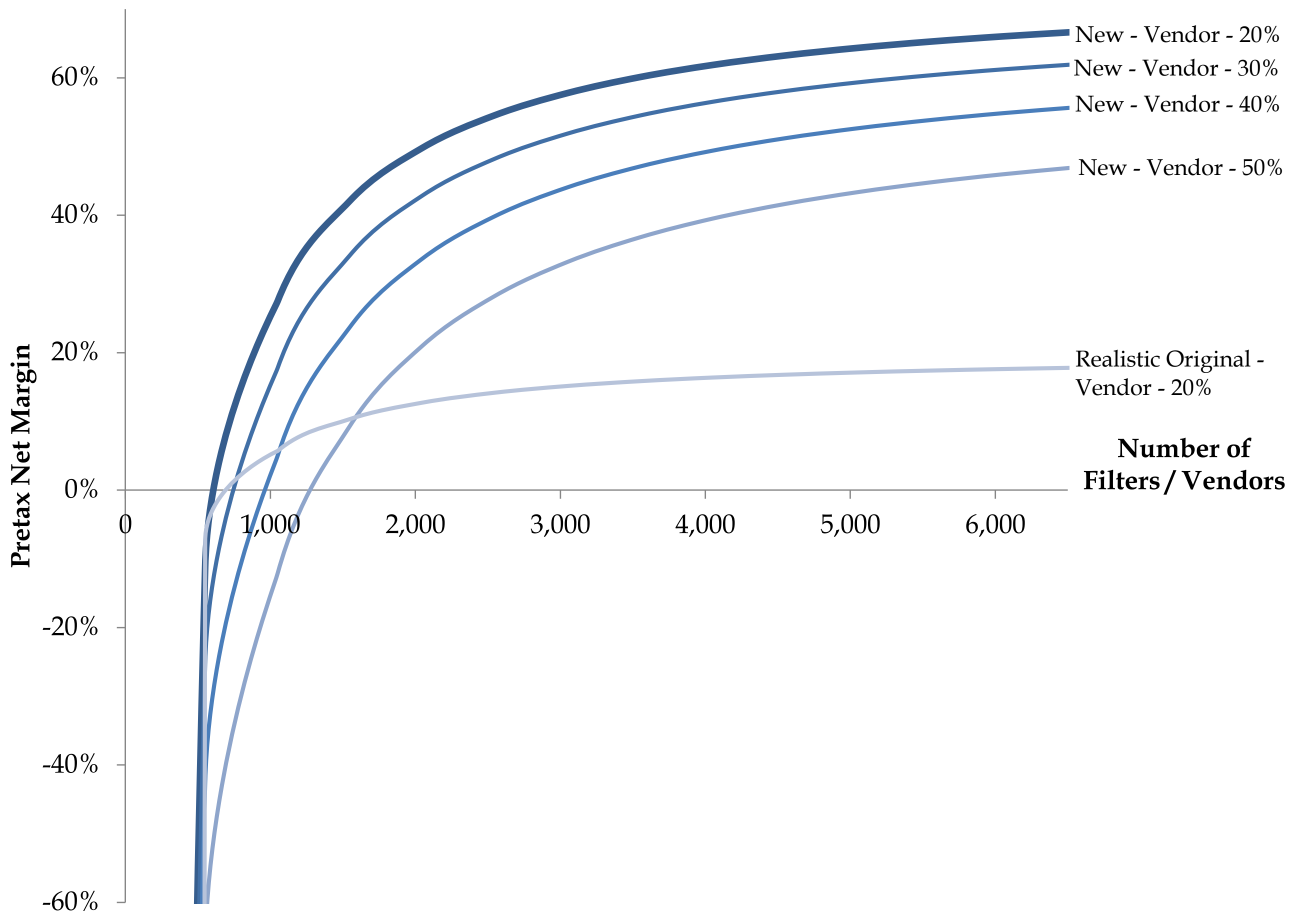
Cash flow positive during each of the projected years and sustainable beyond a $200,000 equity infusion in year 1 and a $1mm term loan in year 2

Revenue Sources



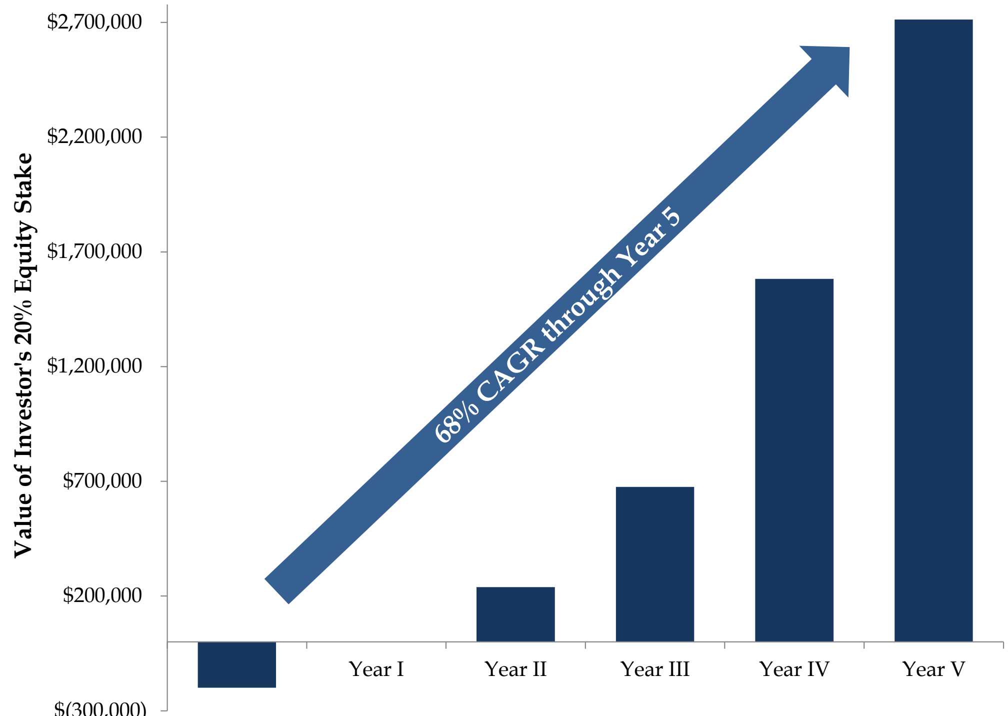
Microfinance is a small, low risk component of revenue, but a significant enabler of UWP’s water business

The Impact of Scale



Profitability is driven by scale; the suggested model drives more substantial upside than a realistic view of the original model

Investor Return - Multiples



	Year I	Year II	Year III	Year IV	Year V
Projected EBITDA Multiple	*2.0x*	*3.0x*	*3.8x*	*4.0x*	*5.6x*
Projected Net Revenue Multiple	*0.2x*	*0.3x*	*0.5x*	*0.7x*	*0.9x*
Avg Value of Investor's Stake	na	$ 238,455	$ 675,851	$1,582,069	$2,713,065
Annual Rate of Return	***na***	***9%***	***50%***	***68%***	***68%***

An investor can earn a very attractive annualized return on a $250,000 investment, based on comparable consumer staples multiples (adjusted down)

1st Expansion – Within Tanzania

Arusha, *Tanzania*

Population: 1.3mm (2002)

- WaterAid is active throughout Tanzania
- Arusha has active, year-round water vendors on the streets
- CAGE distance is negligible

Expanding to Arusha leverages WaterAid's existing operations and UWP's Tanzanian relationships to further the company's social mission

2nd Expansion – Outside Tanzania

Nairobi,
Kenya

Population: 3.1mm

- WaterAid is active
- Vendor culture
- CAGE is lower

Kampala,
Uganda

Population: 1.4mm

- WaterAid is active
- Vendor culture
- CAGE is lower

Lusaka,
Zambia

Population: 1.7mm

- WaterAid is active
- Vendor culture
- CAGE is moderate

Maputo,
Mozambique

Population: 1.3mm

- WaterAid is active
- Vendor culture
- CAGE is higher

UWP can have the most success expanding into bordering countries that satisfy its expansion criteria; in order, Nairobi, Kampala, Lusaka, and Maputo

Timeline

Within 1 month

- Initiate relationship with WaterAid
- Hire managers
- Set up MFI
- Select districts
- Find first cooperatives

Within 6 months

- Set cooperative sales targets
- Begin mobile app development
- Partner with local artists

Within 1 year

- Analyze health survey data
- Expand to ten districts
- Review sales targets; get feedback from cooperatives
- Reward top cooperatives

Within 5 years

- Work with BFF to set up manufacturing plant in Tanzania
- Expand within Tanzania and to other East African countries
- Continue to monitor consumer health

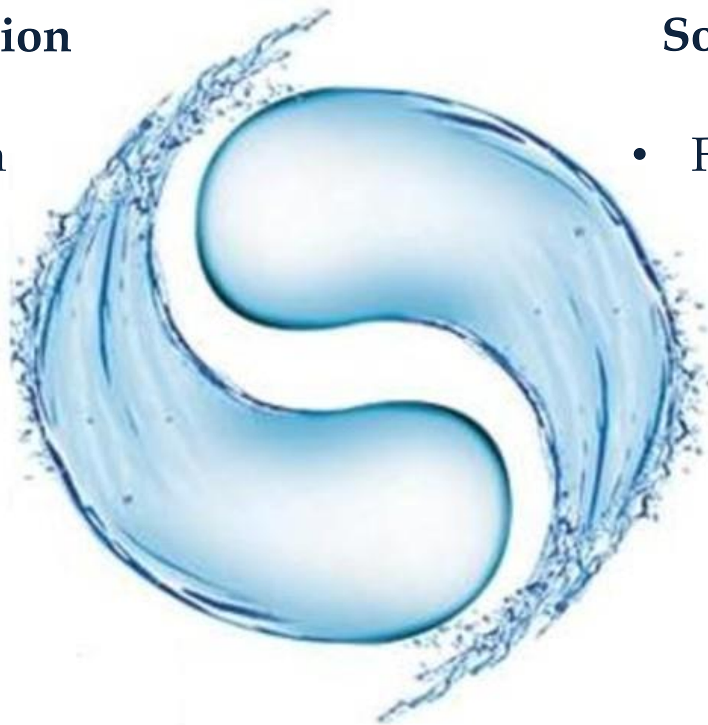
UWP will be in a strong position for growth within Tanzania by the end of the first year and outside of Tanzania by the end of the fifth year


Conclusion

Conclusion

Shareholder Value Creation

- 68% equity appreciation
- 45% annual profit growth
- $7 million annual revenue by 2016



Social Value Creation

- Female empowerment
- Reduced pollution
- Improved health
- Economic prosperity

Co-Creation of Value in East Africa

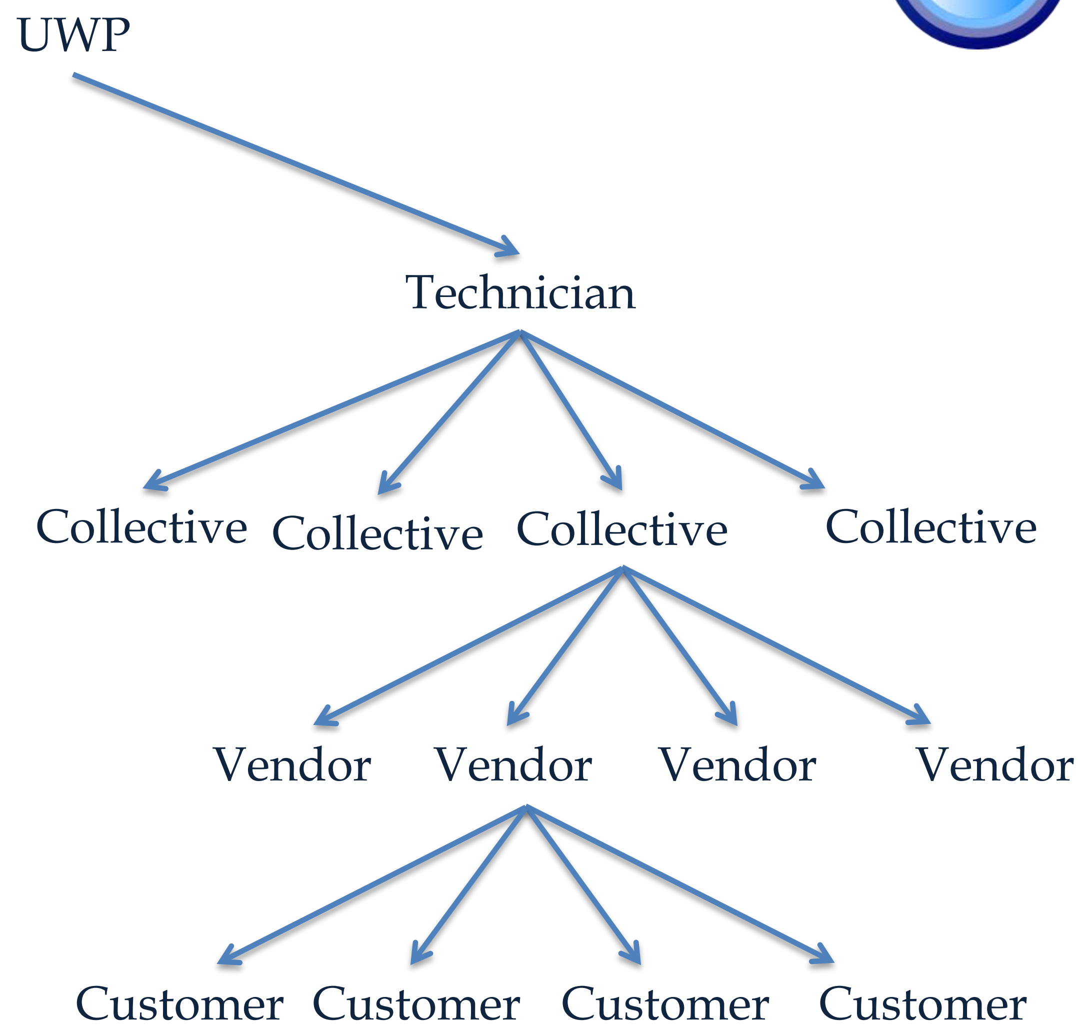
Seeking a $200,000 investment for 20% equity stake

UWP

Thank You

Appendix

New Business Model



<u>Goals</u>

- Increase vendor accountability
- Eliminate under-reporting and filter damage
- Leverage community ties and ensure social value creation

New Business Model - Roles

UWP

- Coordinator of the network
- Link between vendors and BFF
- Provides micro-financing support

Technician

- Trained by NGO partner – WaterAid
- Serve the role of technicians
- Oversee collectives in each district

Collective

- Link to the customers
- Remit revenue to UWP and repayment
- Groups of 5 – 6 which are collectively responsible for loan repayments

Vendor

Business Model Summary

Acceptability

Affordability

Availability

Awareness

- Women not eliminating need for male water vendors
- Attachment to WaterAid brand mitigates lack of local knowledge
- Micro-financing an acceptable method of purchasing in Tanzania

Business Model Summary

Acceptability

- Women not eliminating need for male water vendors
- Attachment to WaterAid brand mitigates lack of local knowledge
- Small up-front cost to attach to local water network
- Micro-financing an acceptable method of purchasing in Tanzania
- Micro-financing breaks purchases down into manageable payments

Affordability

- Portion of initial purchase being covered by UWP

Availability

Awareness

Business Model Summary

Acceptability

Affordability

- Small up-front cost to attach to local water network
- Micro-financing breaks purchases down into manageable payments
- Collectives create clusters for consumers to travel to
- Portion of initial purchase being covered by UWP
- Managers regional-focus makes them easy to access for repairs

Availability

- Product itself has excess capacity to account for peaks in demand

Awareness

Business Model Summary

UWP

Acceptability

Affordability

Availability

- Collectives create clusters for consumers to travel to
- Managers regional focus makes them easy to access for repairs
- Branding on the jugs allows for quick recognition
- Collectives able to leverage off their existing community networks
- Product itself has excess capacity to account for peaks in demand

Awareness

- Co-branding with NGO gives instant credibility and reach

Projected Income Statement

Income Statement	Year I	Year II	Year III	Year IV	Year V
Gross Revenue - Water	$ 73,000.0	$ 2,920,000.0	$ 4,380,000.0	$ 6,132,000.0	$ 7,008,000.0
Interest Revenue - Loan Portfolio	$ 1,505.6	$ 57,565.2	$ 79,923.0	$ 96,539.6	$ 108,586.6
Provision for Loan Losses	$ 243.8	$ 9,683.0	$ 11,895.2	$ 14,717.7	$ 16,764.1
Revenue Sharing - Vendor	$ 24,333.3	$ 973,333.3	$ 1,460,000.0	$ 2,044,000.0	$ 2,336,000.0
Net Revenue	$ 49,928.6	$ 1,994,548.9	$ 2,988,027.9	$ 4,169,821.8	$ 4,763,822.4
Total Expenses	$ 197,066.7	$ 1,364,166.7	$ 1,955,500.0	$ 2,283,366.7	$ 2,523,633.3
Operating Income / EBIT	$ (147,138.1)	$ 630,382.3	$ 1,032,527.9	$ 1,886,455.2	$ 2,240,189.1
Net Earnings Before Tax	**$ (147,138.1)**	**$ 730,382.3**	**$ 1,032,527.9**	**$ 1,886,455.2**	**$ 2,240,189.1**

Projections reveal substantial profit potential, with the business turning profitable in year 2

Projected Statement of Cash Flows

Statement of Cash Flows	Year I	Year II	Year III	Year IV	Year V
Operating Cash Flow					
Pretax Income	$ (147,138.1)	$ 730,382.3	$ 1,032,527.9	$ 1,886,455.2	$ 2,240,189.1
Loan Principal Repayment	$ 2,437.5	$ 96,829.7	$ 70,201.5	$ 98,427.4	$ 118,891.1
Loans Originated	$ (9,750.0)	$ (380,250.0)	$ (195,000.0)	$ (195,000.0)	$ (195,000.0)
Provision for Loan Losses	$ 243.8	$ 9,683.0	$ 11,895.2	$ 14,717.7	$ 16,764.1
Depreciation	$ 4,666.7	$ 117,166.7	$ 175,500.0	$ 202,166.7	$ 228,833.3
Total Cash Flow from Operations	*$ (149,540.2)*	*$ 573,811.6*	*$ 1,095,124.5*	*$ 2,006,766.9*	*$ 2,409,677.6*
Cash Flows from Investing					
Capex - Filters	$ (10,000.0)	$ (390,000.0)	$ (200,000.0)	$ (62,500.0)	$ (62,500.0)
Capex - Motorcycles	$ (7,500.0)	$ (195,000.0)	$ (100,000.0)	$ (50,000.0)	$ (50,000.0)
Capex - Trucks	$ (12,500.0)	$ (237,500.0)	$ (125,000.0)	$ (62,500.0)	$ (62,500.0)
Total Cash Flow from Investing	*$ (30,000.0)*	*$ (822,500.0)*	*$ (425,000.0)*	*$ (175,000.0)*	*$ (175,000.0)*
Cash Flows from Financing					
Total Cash Flow from Financing	*$ 200,000.0*	*$ 1,000,000.0*	*$ (1,000,000.0)*	*$ -*	*$ -*
Total Cash Flow	$ 20,459.8	$ 751,311.6	$ (329,875.5)	$ 1,831,766.9	$ 2,234,677.6
Beginning Cash Position	$ -	$ 20,459.8	$ 771,771.4	$ 441,895.9	$ 2,273,662.9
Change in Cash Position	$ 20,459.8	$ 751,311.6	$ (329,875.5)	$ 1,831,766.9	$ 2,234,677.6
Ending Cash Position	**$ 20,459.8**	**$ 771,771.4**	**$ 441,895.9**	**$ 2,273,662.9**	**$ 4,508,340.5**

UWP is projected to generate strong cash flow – it sustains itself off internally generated cash flows and the previously outlined financing plan

Select Projected Ratios

Ratios	Year I	Year II	Year III	Year IV	Year V
Return on Equity	-70%	511%	735%	1250%	1470%
Investor's Claim on Earnings	$ (27,967.6)	$ 204,476.5	$ 294,105.6	$ 499,931.0	$ 588,197.8
Investor's Claim on Retained Earnings	$ (27,967.6)	$ 176,508.8	$ 470,614.4	$ 970,545.4	$1,558,743.3
Implied Annual Rate of Return	*-114%*	*-6%*	*33%*	*48%*	*51%*
Investor's Claim on Cash	$ 5,552.0	$ 214,214.3	$ 235,839.2	$ 724,832.6	$1,311,928.1
Implied Annual Rate of Return	*-97%*	*3%*	*6%*	*38%*	*46%*
Asset Replacement Value	$ 10,000.0	$ 400,000.0	$ 600,000.0	$ 437,500.0	$ 500,000.0
Investor's Claim on Assets	$ 2,000.0	$ 80,000.0	$ 120,000.0	$ 87,500.0	$ 100,000.0

UWP offers investment protection through claims on various assets

Vendor's Perspective

Projected Financial Impact for a Vendor	Year I	Year II	Year III	Year IV	Year V
Revenue per Day	$ 4.0	$ 4.0	$ 4.0	$ 4.0	$ 4.0
Remitted to UWP	$ 2.7	$ 2.7	$ 2.7	$ 2.7	$ 2.7
EBITDA per Month	$ 40.0	$ 40.0	$ 40.0	$ 40.0	$ 40.0
EBITDA per Year	$ 486.7	$ 486.7	$ 486.7	$ 486.7	$ 486.7
Interest Expense	$ 36.3	$ 25.0	$ 14.8	$ 4.9	$ -
Net Profit per Year	$ 450.3	$ 461.7	$ 471.8	$ 481.7	$ 486.7
Net Cash Flow per Year	$ 401.6	$ 412.9	$ 423.1	$ 433.0	$ 486.7
Cost of Equity	21%				
NPV	**$2,135.83**				
Credit Analysis					
Total Debt / EBITDA	0.30x	0.20x	0.10x	0.00x	0.00x
EBITDA / Interest Expense	13.39x	19.48x	32.78x	98.35x	na

Vendors can earn 25% above GDP per capita and easily service their microloan

Government's Perspective

UWP

Without Ongoing Growth

Projected Financial Impact for the Government	BASE CASE DRIVERS					
	Year I	Year II	Year III	Year IV	Year V	
# Cooperatives	10	400	600	600	600	
Connections per Cooperative	1	1	1	1	1	
Access Price per Month	$ 15.0	$ 15.0	$ 15.0	$ 15.0	$ 15.0	
Incremental Rev per Month	$ 150.0	$ 6,000.0	$ 9,000.0	$ 9,000.0	$ 9,000.0	Terminal
Incremental Rev per Year	$ 1,800.0	$ 72,000.0	$ 108,000.0	$ 108,000.0	$ 108,000.0	$ 966,600.0
Cost of Equity	18%					
NPV	**$644,389.6**					

To put the NPV in perspective, Habitat for Humanity could build 560 homes in Tanzania with this funding.

In a non-growth scenario, the government will see substantial revenue upside from increased legal water connections.

Government's Perspective

UWP

With Ongoing Growth

Projected Financial Impact for the Government	ADJUSTED DRIVERS - GROWTH					
	Year I	Year II	Year III	Year IV	Year V	
# Cooperatives	10	400	600	700	800	
Connections per Cooperative	1	1	1	1	1	
Access Price per Month	$ 15.0	$ 15.0	$ 15.0	$ 15.0	$ 15.0	
Incremental Rev per Month	$ 150.0	$ 6,000.0	$ 9,000.0	$ 10,500.0	$ 12,000.0	Terminal
Incremental Rev per Year	$ 1,800.0	$ 72,000.0	$ 108,000.0	$ 126,000.0	$ 144,000.0	$ 1,288,800.0
Cost of Equity	18%					
NPV	**$810,246.3**					

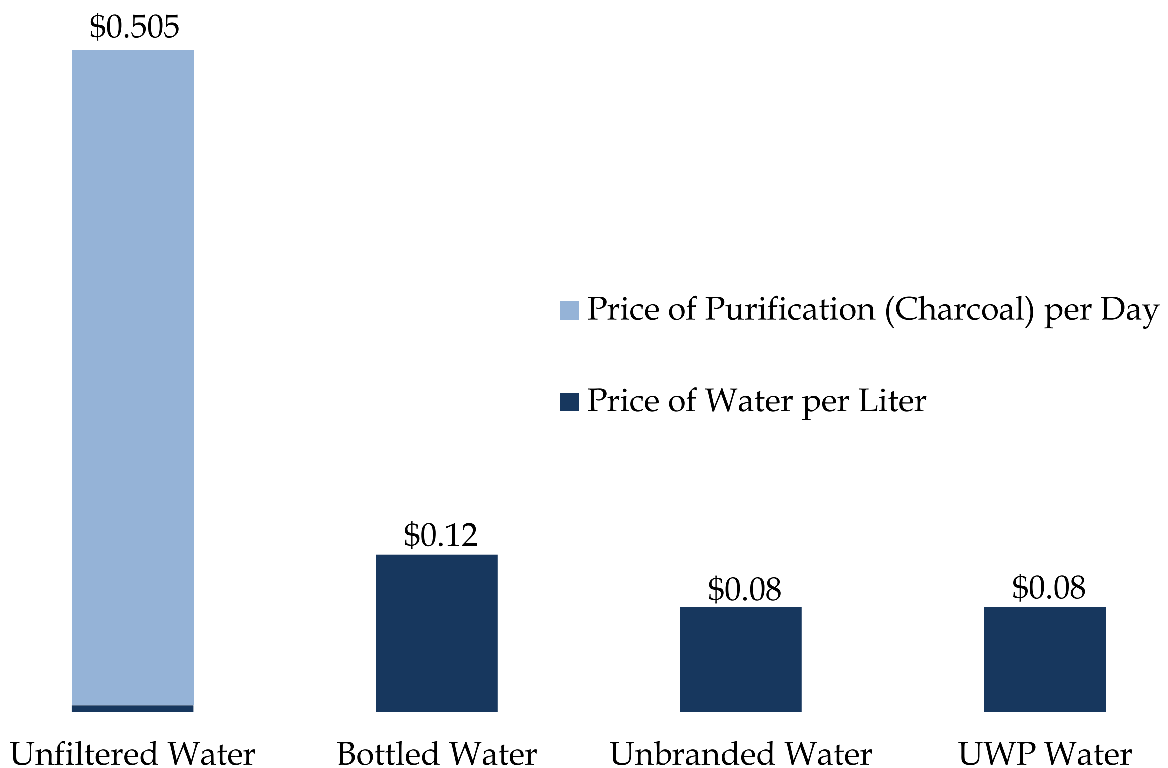
In a growth scenario, the government will see even greater revenue upside from increased legal water connections.

Market Saturation

Size of Market - Dar es Salaam	
Liters Sold per Day	450,000
Share of Market	12%
Total Liters Sold per Day	3,750,000
Maximum Vendors for Complete Saturation	25,000

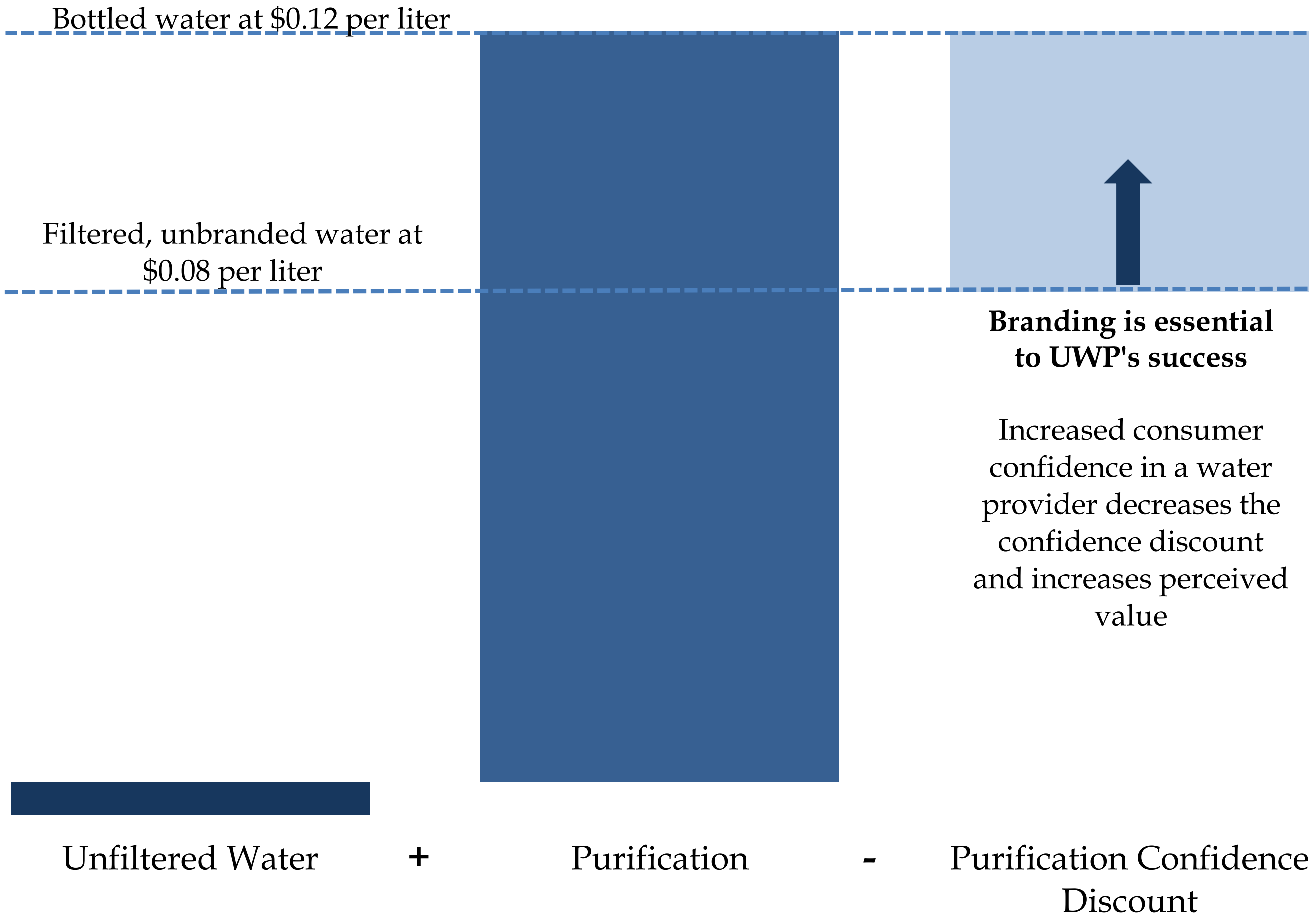
UWP has plenty of room to expand within the city that lessens the drive to expand abroad.

Cost of Water to Consumers



UWP water is competitively priced, and can offer superior value to customers via branding that builds consumer confidence.

Perceived Value of Drinking Water



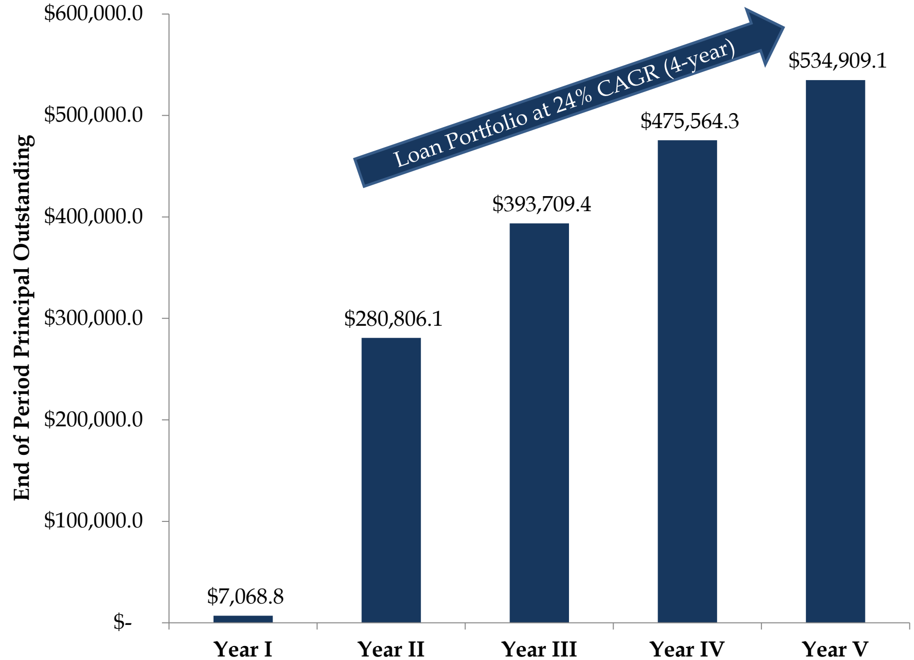
UWP can make itself more competitive by branding its consistently purified water; building consumer trust will increase their willingness to pay.

Suggested Model Drivers

Key Drivers	Year I	Year II	Year III	Year IV	Year V
Retail Price of Water per Liter	$ 0.08	$ 0.08	$ 0.08	$ 0.08	$ 0.08
# Filters (Vendors)	50	2000	3000	3500	4000
Incremental / New Filters	50	1950	1000	500	500
Customers per Vendor per Day	50	50	50	60	60
Liters per Customer per Day	1	1	1	1	1
Underreporting Adjustment	0.0% gross rev	0.0% gross rev	0.0% gross rev	0.0% gross rev	0.0% gross rev
Vendor Share of Gross Revenue	33%	33%	33%	33%	33%
Informal Cost of Doing Business per Year	0.0% gross rev	0.0% gross rev	0.0% gross rev	0.0% gross rev	0.0% gross rev

The key drivers reflect strengthening of the original business model and more conservative estimates for sales

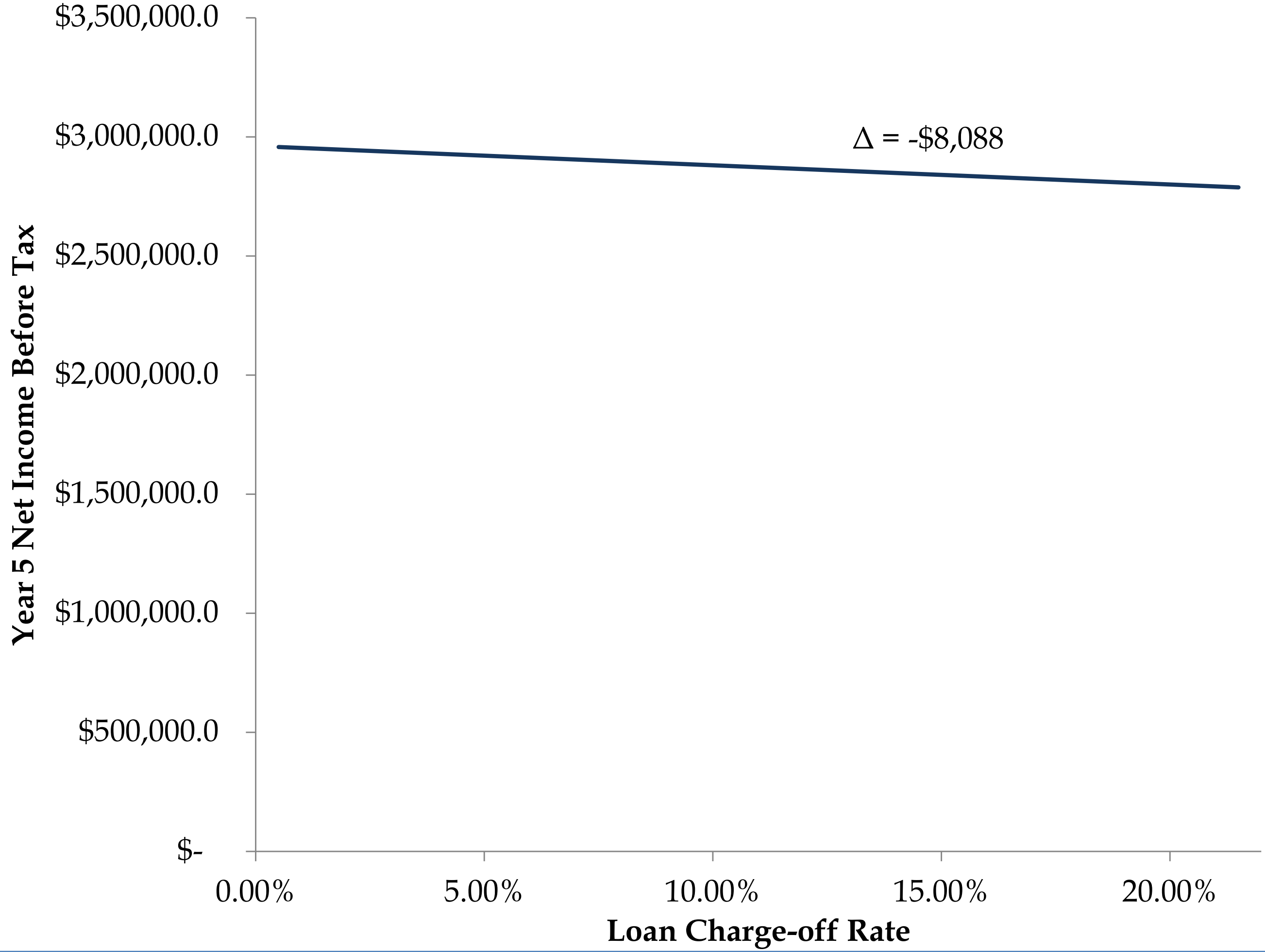
Loan Portfolio Analysis



Loan Portfolio	Year I	Year II	Year III	Year IV	Year V
Beginning Principal Outstanding	$ -	$ 7,068.8	$280,806.1	$393,709.4	$475,564.3
Loans Originated	$ 9,750.0	$380,250.0	$195,000.0	$195,000.0	$195,000.0
Paydown	$ 2,437.5	$ 96,829.7	$ 70,201.5	$ 98,427.4	$118,891.1
Provision for Loan Losses	$ 243.8	$ 9,683.0	$ 11,895.2	$ 14,717.7	$ 16,764.1
PLL %	*2.5%*	*2.5%*	*2.5%*	*2.5%*	*2.5%*
Ending Principal Outstanding	$ 7,068.8	$280,806.1	$393,709.4	$475,564.3	$534,909.1
Interest Rate	*21%*	*21%*	*20%*	*20%*	*20%*
Interest Income	$ 1,505.6	$ 57,565.2	$ 79,923.0	$ 96,539.6	$108,586.6

The loan book is a minor, reinforcing component of the UWP model

Year 5 Profit Sensitivity to Loan Charge-offs



Risk in the loan book does not have a major impact on UWP's profitability

CAGE Framework

Cultural	Administrative
• Different languages • Different ethnicities • Different religions • Different social norms	• Absence of colonial ties • Absence of shared monetary or political association • Political hostility • Government policies • Institutional weaknesses

Geographic	Economic
• Physical remoteness • Lack of a common border • Lack of sea or river access • Size of country • Weak transportation or communication links • Climate differences	• Differences in consumer incomes • Differences in costs and quality of natural, financial, human, infrastructure, and information resources

Ghemawat's CAGE framework gives decision-makers a powerful tool for analyzing expansion opportunities across four key dimensions.