MICROFINANCE CENTRE

European Commission

How to Build a Corporate Immune System in Response to COVID-19

Financial planning and financial modelling

29/04/ 2020

Webinar house keeping rules

- Please switch off your webcam
- Please swith off your microphone during the presentation
- Please write your questions in the chatbox

The webinar is **recorded**

It will be available at mfc.org.pl

EaSI Technical Assistance to the European Microcredit Sector

European Commission

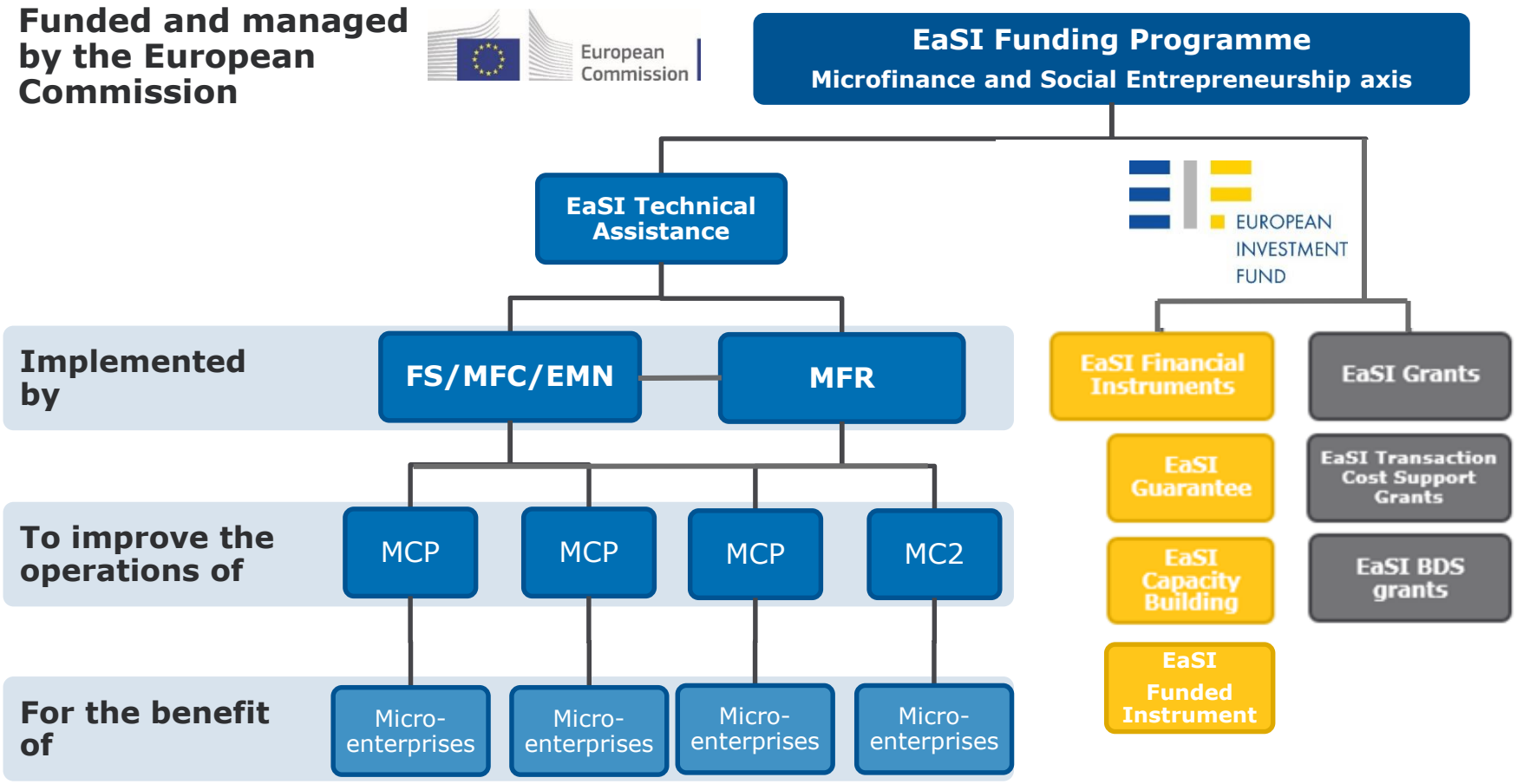
DG Employment, Social Affairs and Inclusion

Programme Snapshot 2020

European Commission

This project has received financial support from the European Union Programme for Employment and Social Innovation "EaSI" (2014-2020).

EaSI Technical Assistance within the EU Programme for Employment and Social Innovation (EaSI)



The EaSI Technical Assistance Service Providers

Service Providers

Technical Assistance:

- Frankfurt School of Finance and Management gGmbH (FS) – Consortium Leader for the Technical Assistance Services
- Microfinance Centre (MFC) – Consortium Partner
- European Microfinance Network (EMN) – Consortium Partner

Assessment, Evaluation and Ratings:

- MF Rating – Provider of Institutional Assessments, Rating and Evaluations

Project Beneficiaries and Geographic Coverage

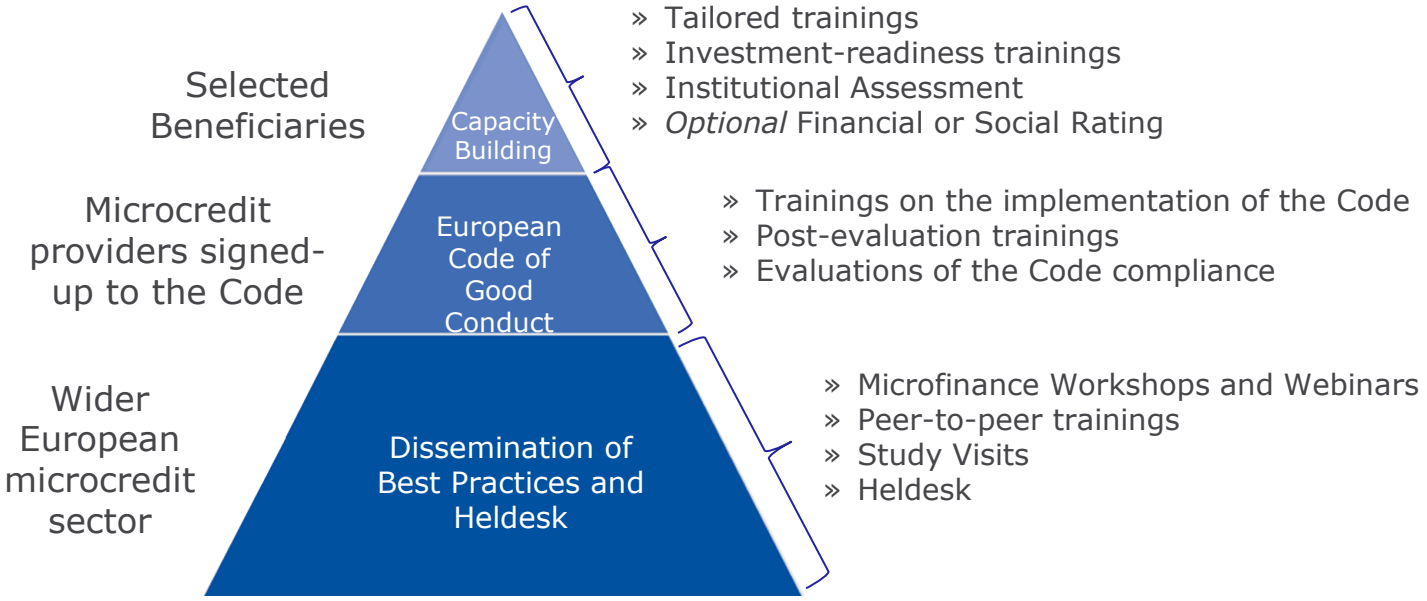
- Public and private financial intermediaries (greenfield microfinance institutions, non-bank microcredit providers, fintechs, licensed banks and guarantee granting entities) in all Member States of the European Union, as well as providers from Albania, North Macedonia, Iceland, Montenegro, Norway, Serbia and Turkey may respond to dedicated Calls for Expression of interest to request EaSI Technical Assistance.

How to Apply for Technical Assistance?

- Before applying eligible microcredit providers must first sign-up to or endorse the European Code of Good Conduct for microcredit provision.
- To apply respond to open Calls for Expression of Interest published on the ec.europa.eu/social/easi webpage.

EaSI Technical Assistance Overview

What is offered to whom?



July 2018 — July 2022

Project Duration – 4 years

European Commission

EaSI Technical Assistance

For more information, about:

Technical Assistance, contact:
easi.ta@fs.de

Ratings and Evaluations, contact:
easi.ta@mf-rating.com

The EaSI Programme, visit:
ec.europa.eu/social/microfinance

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The author of this presentation takes full responsibility for its contents. The opinions expressed do not necessarily reflect the view of the European Commission.

MICROFINANCE CENTRE

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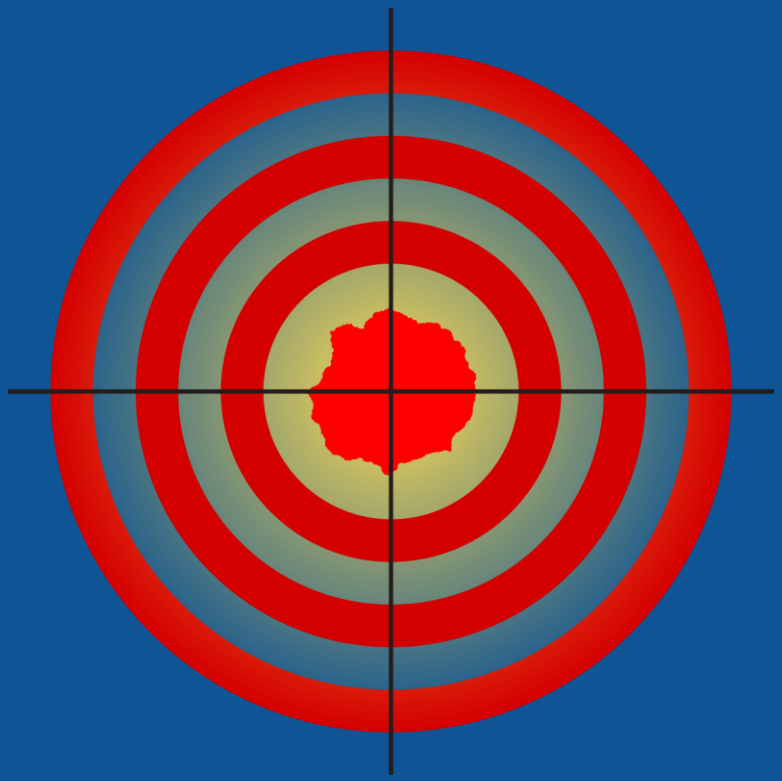

EaSI Technical Assistance

Financial planning

Webinar 6

Artur Munteanu, MBA

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29 April 2020,
online Zoom

Agenda

Introduction: Financial planning process, Zero Based Budgeting

I. Input

Assumptions:

- **Macro**
- **Product**
- **Channels**
- **Oper. and Admin**
- **Funding**

III. Output

- **Cash flow**
- **PL**
- **Balance Sheet**
- **Financial indicators and covenants**
- **Summary output**

II. Calculations

IV. Sensitivity

- **Input sensitivity**
- **Sensitivity output**

For whom?

Top Management

Middle Management

Juniors

Financial analysts

What is financial planning?

A processes by which a company establish:

where it is?

were it wants to go, what it wants to achieve?

what resources are needed?

and how are they allocated?

in measurable terms:

designed, elaborated and presented in the ***form of tables*** *including financial statements and financial indicators*

What is a budget?

A budget is a financial plan for a defined period, **often one year**.

It may also include:

- planned sales volumes and revenues,
- resource quantities,
- costs and expenses,
- assets, liabilities
- cash flows.

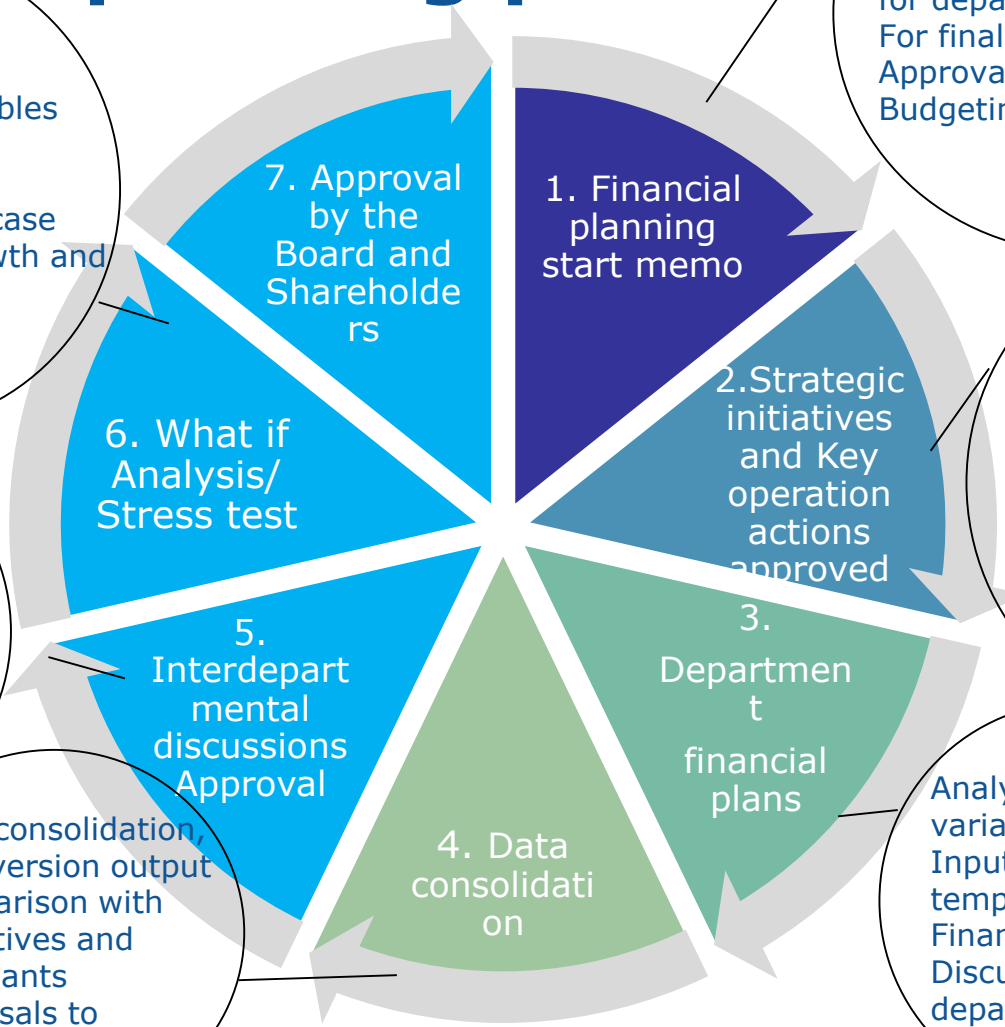
What is financial modeling?

Financial modeling is the task of building an abstract representation (a model) of a real world financial situation.

A mathematical model designed in a computer program usually spread sheets to represent (a simplified version of) the performance of a financial asset or portfolio of a business, project, or any other investment.

Financial planning process

Financial planning process



Responsible persons &
Budgeting committee named
Starting Date & Dead lines
for departments,
For final discussion
Approval at the Board
Budgeting templates

Key strategic scenarios
And resources
Driving factors
Key operation actions and
budgets:
For products,
For channels
For staff
Growth rates
Agreed by Top Mang.
Shareholders

Analyse historical
variance analysis
Inputting data in the
templates sent by the
Financial Department
Discussion with other
departments

Data consolidation,
First version output
comparison with
objectives and
covenants
Proposals to
reallocate.

Several discussions and
iterations with
departments
Negotiations
Several discussion with
CEO
Approval by the Top
Management

Stress test factors
Link with output tables
Discussions with
departments
Approval of worst case
scenario, high growth and
medium growth

Building a model vs. using and existing financial modeling App

Building a model

+ Flexibility

+ Input design

+ Output design in the form of your financial statements

+ direct cash flow with details as you need

+ financial indicators as you need

+ automatic and faster input of historical data

- Time and more resources needed

Using an existing APP

+ Fast to use after a short training

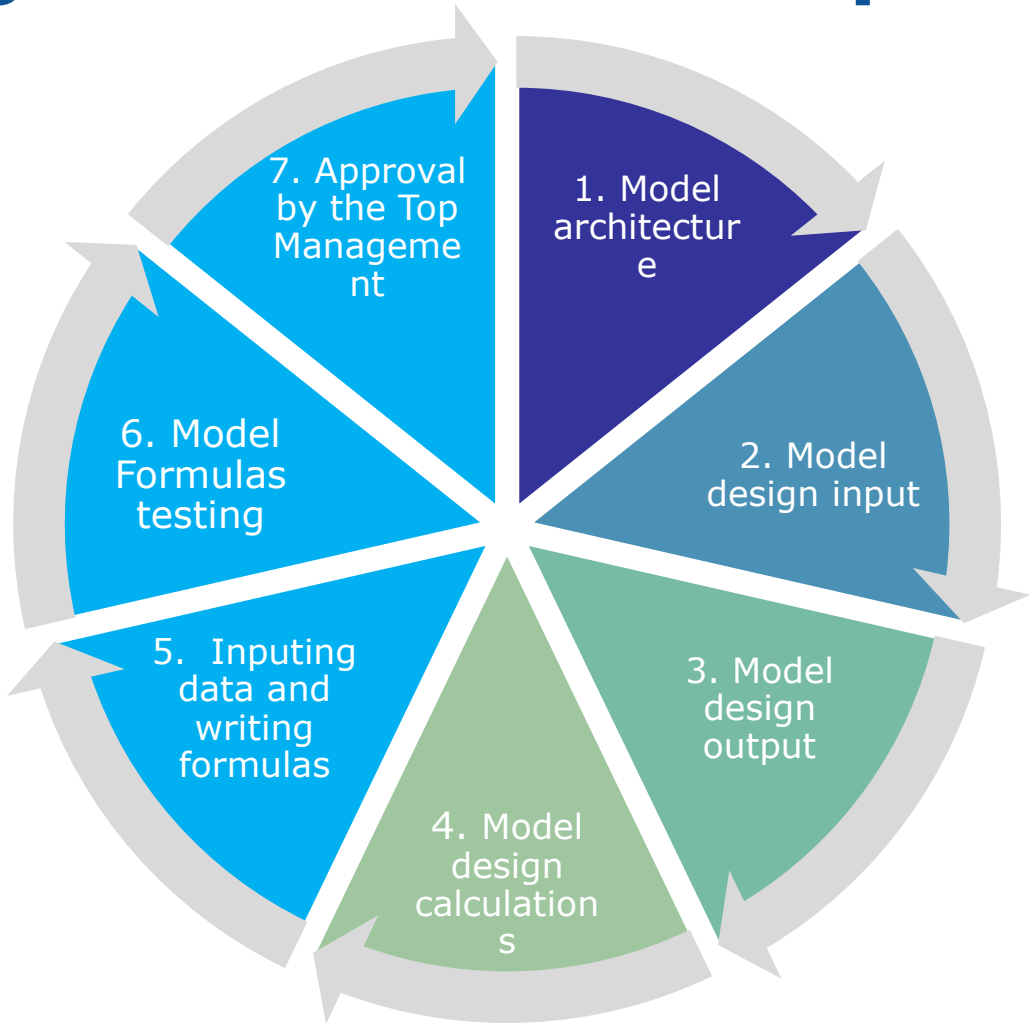
+ Professional App development team

+ Manuals available

- Less flexibility but they can develop for you for a service fee

- Financial statements and other output table in different format.

Building a financial model process



Level of details

Option 1

- Average disbursements,
- Average repayments,
- Average interest,
- Average inflows and outflow

Option 2

- Disbursements
- Portfolio Outstanding
- Portfolio quality
- Provisioning policy
- Interest rate

All info per

- **product**
- **branch**
- **channel**
- **(online, partners)**

Zero based budgeting (ZBB)

A budgeting process that allocates funding based on program efficiency and necessity rather than budget history.

ZBB Require fairly detailed knowledge of department activities and willingness to do less with or discontinue activities.

ZBB is a tool that was invented in the 70s by Texas Instruments' Peter Pyrr, as a way to develop and control a more austere and effective budgeting system

Zero based budgeting vs. incremental budgeting

Zero based

Starting from a zero base

Every expanse must be re-evaluated and justified from scratch

Good instrument for cost efficiency and cost leader institutions

Can reduce incidence "we have always done that"

Complex, time and labour intensive to prioritize activities and spending items

Incremental

Starting with last year actuals

Appling additions or deductions usually in percentage terms to actuals

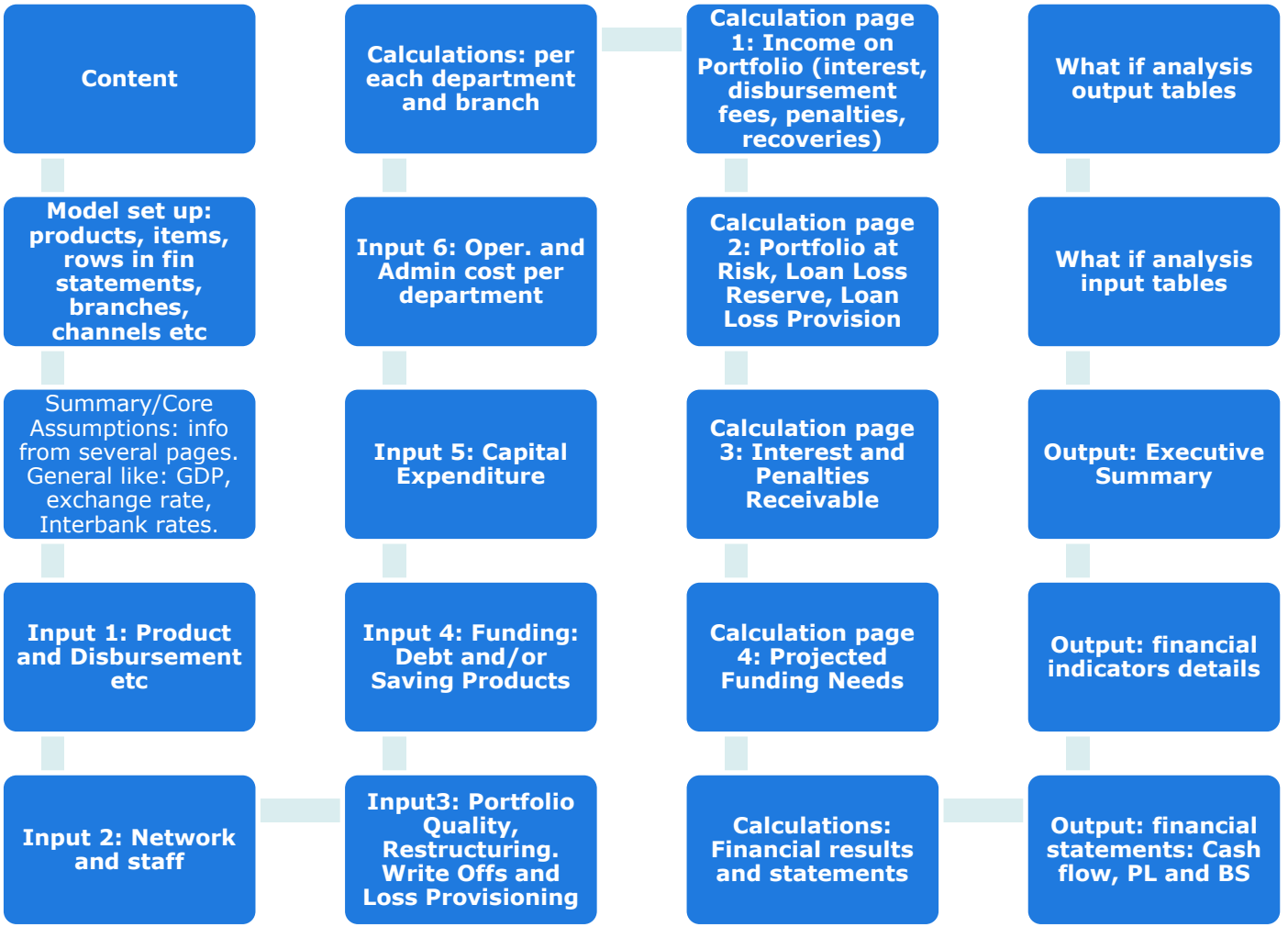
Easy to understand assumptions and to implement

Some times accounting based

In all companies - 10-25% cost reduction is possible

If all team members "like" your CFO and CEO then there is possibility to cut cost by 10-25%. Do team members hate Fin Department?

Financial plan structure



Examples input page: Core Assumptions

Macroeconomic Assumptions	2019	2020	2021	2022	2023	2024
GDP growth rate	4.00%	-5.00%	3.00%	3.00%	3.00%	3.00%
Remmitances growth rate	20.00%	-20.00%	10.00%	10.00%	10.00%	10.00%
Inflation rate	10.70%	6.00%	4.40%	4.30%	4.00%	4.00%
LC / USD	12.167	12.917	12.817	12.317	11.817	11.317
LC / EUR	16.851	17.364	17.264	16.764	16.264	15.764
Linterbank rate 6m (average)	11.32%	10.10%	8.50%	8.30%	8.00%	8.00%
Local interbank 6m (average)	6.50%	5.00%	4.30%	4.00%	3.80%	3.70%
Tbills	7.03%	7.00%	6.50%	6.00%	5.50%	5.00%
LIBOR 3m	0.31%	0.39%	0.48%	0.57%	0.66%	1.16%
LIBOR 6m	0.49%	0.62%	0.77%	0.91%	1.06%	1.56%
LIBOR 12m	0.83%	0.97%	1.11%	1.20%	1.29%	1.79%
EURIBOR 3M	0.80%	1.43%	2.12%	2.81%	3.50%	4.00%
EURIBOR 6M	1.23%	1.32%	1.41%	1.50%	1.59%	2.09%
EURIBOR 12M	1.01%	1.85%	2.78%	3.70%	4.63%	5.13%
Social fund tax rate		20.00	20.00	20.00	20.00	20.00
Profit tax rate		0.00%	12.00%	12.00%	12.00%	12.00%

Examples input page: Core Assumptions

Macroeconomic Assumptions	2019	2020	2021	2022	2023	2024
GDP growth rate	4.00%	-5.00%	3.00%	3.00%	3.00%	3.00%
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Inflation rate	10.70%	6.00%	4.40%	4.30%	4.00%	4.00%
LC / USD	12.167	12.917	12.817	12.317	11.817	11.317
LC / EUR	16.851	17.364	17.264	16.764	16.264	15.764
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LIBOR 6m	0.49%	0.62%	0.77%	0.91%	1.06%	1.56%
LIBOR 12m	0.83%	0.97%	1.11%	1.20%	1.29%	1.79%
EURIBOR 3M	0.80%	1.43%	2.12%	2.81%	3.50%	4.00%
EURIBOR 6M	1.23%	1.32%	1.41%	1.50%	1.59%	2.09%
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Social fund tax rate		20.00	20.00	20.00	20.00	20.00
Profit tax rate		0.00%	12.00%	12.00%	12.00%	12.00%

Examples input page: Core Assumptions

Portfolio Development (See Input 1 p)	2019	2020	2021	2022	2023	2024
Total Disbursements	92,226,087	145,738,000	250,000,000			
% Growth in Disbursements		58.0%	71.5%			
Average maturity (months)		32	32			
Effective avg maturity (months)		24	24			
GLP end of year	162,894,012	191,840,587	259,309,317			
% Growth in GLP		17.77%	35.17%			

Revenue Assumptions	2019	2020	2021	2022	2023	2024
Revenues from Portfolio		19.0%	19.0%			
Weighted Avg Interest Rate (annual)		2.3%	2.0%			
Weighted Avg Disbursement Fee (one-time)		37.5%	37.5%			
Avg. % of Fee Income Recognized in current year		5,284,578	1,793,702			
Fee Income on loans disbursed before	0.3%	0.3%	0.3%			
Penalty Interest Rate (daily)		26.0%	27.0%			
% of PAR 1-90 in arrears	14.0%	7.3%	7.3%			
% of interest receivable past due 1-90 days						

Examples input page: Core Assumptions

Network and personel (Input 2)	2019	2020	2021	2022	2023	2024
Number of branches	16	17	19			
Number of HQ staff	53	32	43			
Total number of branch staff	53	40	55			
Total number of loan officers	31	45	49			
Total number online channel	7	14	30			
Legal and Collections staff	5	7	17			
Total number of staff	118	93	145			

Examples input page: Core Assumptions

Portfolio quality assumptions (See Input 3 p)	2019	2020	2021	2022	2023	2024
Portfolio at Risk						
Current	86.50%	75.4%	91.8%			
1-30	8.53%	10.4%	4.0%			
31-60	0.82%	2.3%	0.7%			
61-90	1.66%	1.6%	1.3%			
91-180	2.24%	9.5%	2.0%			
180+	0.25%	0.7%	0.2%			
Total PAR>30	5.0%	14.2%	4.2%			
Total PAR>90	2.5%	10.2%	2.2%			
Restructuring rates						
Restructuring rate/ Average GLP		9.7%	5.0%			
Restructured portfolio amount		11,166,000	11,278,748			
Restructured interest %						
Restructured interest amount						
Write-offs						
Write-offs of loans / Average GLP		6.3%	5.0%			
Loans written off		11,166,000	11,278,748			
Interest written off as a % of Interest Income		9.5%	5.0%			
Penalties written off as a % of Accrued Penalty Income		60.0%	60.0%			

Examples input page: Core Assumptions

	Write-offs and Recovery	2019	2020	2021	2022	2023	2024
	Recovery Rate: % of outstanding loans written off recovered		22.4%	25.0%			
	Recovery Rate: % of outstanding interest written off recovered		20.0%	25.0%			
	Recovery Rate: % of outstanding penalties written off recovered		6.7%	8.0%			
	Outstanding Write-offs on loans	36,340,626	36,865,142	36,107,917			
	Outstanding Write-offs on interest	7,193,317	8,215,674	7,731,332			
	Outstanding Write-offs on penalties	12,588,366	15,753,440	17,682,757			
	Cummulative write-offs on loans from beginning of MFI activities	46,941,372					
	Cummulative recoveries on loans from beginning of MFI activites	7,600,747					
	Loan Loss Reserve and Provisio	2019	2020	2021	2022	2023	2024
	% Reserve on standard portfolio		1.2%	1.1%			
	% Reserve on PAR<30		45.0%	30.0%			
	% Reserve on PAR>30		45.0%	35.0%			
	% Reserve on past due interest		70.0%	70.0%			
	% Reserve on penalty interest		100.0%	100.0%			

Examples input page: Core Assumptions

Funding Assumptions (see Input 4 page)	2019	2020	2021	2022	2023	2024
Borrowings and equity						
Borrowings as percentage of liabilities	80%	70.0%	70.0%			
Amount of borrowings	143,000,000	167,000,000				
Weighted average interest rate (existing debt)	8.66%	8.7%	0.0%			
Weighted average interest rate (new debt)		11.7%	9.0%			
Avg commissions and fees / borrowings		0.2%	0.2%			
Withholding taxes / borrowings		0.82%	0.80%			
Minimum Equity/(Assets - 80% of Cash - 100% of FX D		20.0%	20.0%			
Minimum Cash Position (Cash/Assets)		5.0%	5.0%			
Funding: savings/depozit						
Depozits as percentage of total liablity	20.0%	30.0%	30.0%			
Amount	55,000,000	75,000,000	75,000,000			
Weighted average interest rate (existing depozits)	7.0%	7.0%	7.0%			
Weighted average interest rate (new depozit accounts)		8.0%	8.0%			

Examples Detailed input page 1: Portfolio

Product	Product characteristics 2020						
	% of Disbursements	% of GLP	Avg Loan Size	Avg Active Loan Size	Avg Loan Tenor (mths)	Weigted Avg Interest Rate	Disbursement Fee
Product 1	71.00%	64.89%	81,415	50,280	24	19.10%	2.5%
Product 2	2.00%	2.80%	11,510	7,398	24	24.00%	3.0%
Product 3	2.00%	4.18%	100,000	202,655	24	22.29%	2.5%
Product 4	9.00%	10.86%	15,483	31,333	24	22.42%	2.5%
Product 5	1.00%	3.27%	87,540	131,989	24	10.67%	0.0%
Product 6	15.00%	14.00%	391,153	401,995	24	15.50%	1.0%
Weighted Average			**120,977**	**104,339**	**24**	**19.0%**	**2.3%**

Examples Detailed input page 1: Portfolio

Product	# of Loans Disbursed				
	2020	2021	2022	2023	2024
Product 1	1,271	2,180	3,150	4,068	5,115
Product 2	253	434	628	811	1,019
Product 3	29	50	72	93	117
Product 4	847	1,453	2,100	2,712	3,409
Product 5	17	29	41	53	67
Product 6	56	96	139	179	225
Weighted Average	**2,473**	**4,242**	**6,130**	**7,916**	**9,952**

Examples Detailed input page 1: Portfolio

Product	# of Loans Disbursed				
	2020	2021	2022	2023	2024
Product 1	1,271	2,180	3,150	4,068	5,115
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Product 5	17	29	41	53	67
Product 6	56	96	139	179	225
Weighted Average	**2,473**	**4,242**	**6,130**	**7,916**	**9,952**

European Commission

Disbursement Assumptions	Total	January	February	March	April	....	December
2019	92,226,087	1,104,498	7,144,169	9,573,990	9,289,582		8,500,000
2020	145,738,000	5,400,000	10,460,000	17,161,500	16,311,500		14,713,500
2021	250,000,000	9,263,198	17,943,158	29,438,959	27,980,863		25,239,642
2022	361,250,000	13,385,322	25,927,864	42,539,296	40,432,347		36,471,283
2023	466,500,000	17,285,128	33,481,933	54,933,097	52,212,290		47,097,173
2024	586,500,000	21,731,463	42,094,649	69,063,798	65,643,104		59,212,201

Repayment Assumptions	Total	January	February	March	April	....	December
Repayments on Existing Portfolio as of 2019							
2019	-						
2020	74,127,363	6,177,280	6,177,280	6,177,280	6,177,280		6,177,280
2021	44,351,523	3,695,960	3,695,960	3,695,960	3,695,960		3,695,960
2022	26,400,000	2,200,000	2,200,000	2,200,000	2,200,000		2,200,000
2023	1,209,753	1,209,753					
2024	-						
Repayments on Loans Disbursed from 2020 to 2024						....	
2019	-						
2020	31,498,063	-	225,000	660,833	1,375,896		5,459,354
2021	126,901,000	6,072,417	6,458,383	7,206,015	8,432,638		15,437,432
2022	235,772,040	16,489,083	16,759,836	17,284,294	18,144,761		23,058,571
2023	321,144,633	23,796,296	24,050,520	24,542,960	25,350,896		29,964,719
2024	443,349,626	30,657,407	31,462,276	33,021,338	35,579,256		42,158,605

Outstanding Portfolio	Total	January	February	March	April	....	December
Total Outstanding Portfolio							
2019	162,894,012	228,441,690	221,331,925	210,357,231	210,494,430		162,894,012
2020	191,840,587	162,116,732	165,243,952	174,636,838	182,464,662		191,840,587
2021	259,309,317	190,395,513	197,244,432	214,841,520	229,753,889		259,309,317
2022	368,597,294	269,971,383	276,416,155	298,947,901	318,512,232		368,597,294
2023	506,182,063	360,329,636	369,214,312	399,057,713	425,372,371		506,182,063
2024	643,583,609	496,777,050	506,930,354	542,493,745	572,078,524		643,583,609

Calculation pages

Calculation pages

You may want to partner with a specialized person on formulas or even Visual Basic for Applications (VBA) programming

Do not insert data in the formulas

Do not make formulas to long, instead create additional separate calculation page or table

Testing, Testing and again Testing

Output

Output outreach and financial statements

Output		PROJECTED 2020	2021	2022	2023	2024
Outreach						
	# of Branches	20	21	22	23	25
	% clients reached and served online	5%	10%	30%		
	Value of Loans Disbursed (millions)	25.9	250.0	361.3	466.5	586.5
Balance Sheet						
	Gross Loan Portfolio (millions)					
	Loan Loss Reserve					
	Total Assets					
	Total L Borrowings					
	Total L Savings and Current Acc					
	Total Equity					
Income Statement						
	Revenue on Portfolio					
	Financial Cost					
	Total Provision Expense					
	Other Financial Income					
	Net Margin					
	Total Operational Costs					
	Net Income from Operations					
	Net Income					

Output financial indicators

Output	PROJECTED 2020	2021	2022	2023	2024
Key Ratios					
% Growth in GLP					
PAR > 30 (%)					
Write-off Ratio					
Loan Loss Reserves / PAR>30					
Recovery Rate					
Total Equity/(Assets - 80% of Cash - 100% of FX Deposits)					
(Total Debt - 100% of FX Deposits) / Total Equity					
ROE	*14.9%*	*15.6%*	*16.7%*	*14.6%*	*21.1%*
ROA					
Cost to Income Ratio					
Operational Self-Sufficiency					
Yield on Portfolio (% of Avg. GLP)					
Funding Ratio (net of interest on deposits) (% of Avg. GLP)					
Provisioning Ratio (% of Avg GLP)					
Portfolio financial margin					
Funding Requirements					
New Equity Required	-	-	-	2.5	1.3
New Debt Financing Required	-	2.5	1.3	10.0	10.0
New Debt Financing (excluding back-	-	2.5	1.3	15.0	15.0

Output pages

Use your standard financial statements that are used in your MIS

Use your standard financial indictors formulas including indicators used for covenants with creditors

Use some “group” and “ungroup” functions to shorten for presentation purposes

Better visualization of output

If you use Microsoft use Power BI

It can be used for budget variance

Power BI is a business analytics service by Microsoft. It aims to provide interactive visualizations and business intelligence capabilities with an interface simple enough for end users to create their own reports and dashboards.

Stress test/ What if analysis

Output stress test pages

Output	PROJECTION v2019		MULTIFCATOR LOW impact		MULTIFCATOR MEDIUM impact		MULTIFCATOR HIGH Impact	
	2020	2021	2021	2022	2021	2022	2021	2022
Outreach								
# of Branches	23	25	20	21	15	18	10	10
% clients reached and served online			10%	20%	10%	20%	0%	0%
Value of Loans Disbursed (millions)	466.5	586.5	373.2	469.2	373.2	469.2	373.2	469.2
Balance Sheet								
Gross Loan Portfolio (millions)	506.2	643.6	405.4	515.3	380.0	400.0	350.0	300.0
Loan Loss Reserve	(9.1)	(11.5)	(7.2)	(9.2)				
Total Assets	759.5	897.1	621.2	730.0				
Total L Borrowings	627.5	733.3	513.4	596.8				
Total L Savings and Current Acc								
Total Equity	114.4	142.8	93.5	116.1				
Income Statement								
Revenue on Portfolio	96.0	124.3	73.5	95.0				
Financial Cost	43.8	50.4	40.1	46.7				
Total Provision Expense	14.4	15.5	11.5	12.4				
Other Financial Income	24.1	22.4	21.7	19.6				
Net Margin	61.9	80.8	43.6	55.7				
Total Operational Costs	42.3	46.6	41.3	45.2				
Net Income from Operations	19.6	34.2	2.3	10.4				
Net Income	15.4	27.1	1.6	8.1				

Manuals. How to use the model

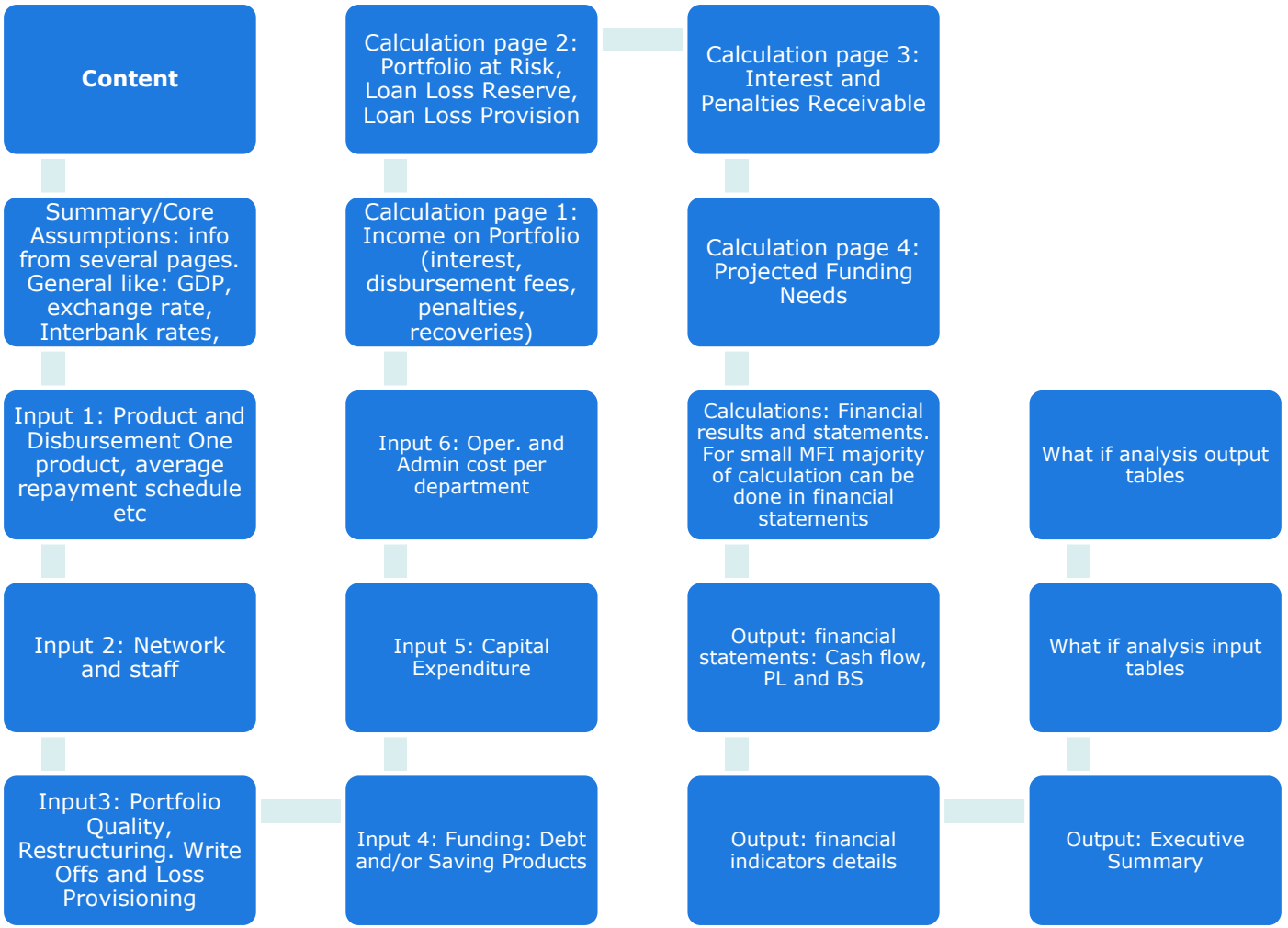
User manuals

Writing manuals or you will rewrite the model!

Not only how to use but also how to program, develop the model

Involve more people including external specialized firms

For smaller MFIs



Financial plan structure for smaller, Sturt-ups or earlier stage, MFIs

Apply one loan product model

One average repayment schedule as key assumption

Several assumptions related to bad debt depending on the strategy PAR 5% or 25%

List operational and admin expenses and go to Cash flow

How to Build a Corporate Immune System in Response to

Webinars recordings and other resources related to pandemic crises:

www.mfc.org.pl/coronavirus-pandemic-good-practices-resources-library/

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… and more at http://mfc.org.pl/digital-literacy-bootcamp-diglit/

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European Commission

Thank you!

Contact us!

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