



Intellect-Nova
Automated Settlement Service

BUSINESS PLAN ONLINE



Business plan report (free)

Table 1 - The cost of the necessary fixed assets, k\$

Fixed assets:	Cost, k\$	Period of operation, years	Salvage cost, k\$
Buildings	200.0	20.0	2
Vehicles	4.0	5.0	0.04
Equipment	220.0	5.0	2.20
Furniture	30.0	4.0	0.30
Computers	4.50	4.0	0.05
Software	7.0	2.0	0.07
Other	0.50	4.0	0.01
Capital assets	466		

Table 2 - Planning of personnel quantity and salary budget

Indicator	2016	2017	2018	2019	2020
Personnel quantity	2	2	3	3	3
Salary fund, k\$	96	96	180	180	180
Social insurance, k\$	28.80	28.80	54	54	54
Salary budget, k\$	124.80	124.80	234	234	234

Table 10 - Other costs planning for 2017 – 2021

Indicator	2016	2017	2018	2019	2020
General occupancy	1.0	1.10	1.21	1.33	1.46
Advertising	12.0	14.40	15.84	17.42	19.17
Communications	2.0	2.20	2.42	2.66	2.93
Delivery services	1.0	1.20	1.56	1.87	2.06
Accounting services	18.0	21.60	28.08	33.70	37.07
Utility charges	37	40.70	44.77	49.25	54.17
Total	71	81.20	93.88	106.23	116.86

Table 12 - Operation costs planning for 2017 – 2021

Indicator	2016	2017	2018	2019	2020
Material expenses	5.35	5.56	7.98	8.23	8.27

Labor expenses	96	96	180	180	180
Social insurance	28.80	28.80	54	54	54
Depreciation	66.38	66.38	62.91	62.91	54.25
Other costs	71	81.20	93.88	106.23	116.86
Total	267.53	277.94	398.77	411.37	413.37

Table 13 - Loan amount distribution

Indicator	2016	2017	2018	2019	2020
Loan amount, k\$	116.65	116.65	116.65	116.65	0
Bank interest, k\$	22.65	22.65	22.65	22.65	0
Total debt amount, k\$	139.30	139.30	139.30	139.30	0

Table 15 - Planning of revenues and financial results of Leader Ltd

Indicator	2016	2017	2018	2019	2020
Earnings	406.25	420.82	589.99	607.63	578.72
Costs	290.18	300.59	421.42	434.02	413.37
Profit before tax	116.07	120.24	168.57	173.61	165.35
Income tax	11.61	12.02	16.86	17.36	16.53
Net profit	104.46	108.21	151.71	156.25	148.81

Table 23 – Business Plan Performance indicators

	Indicator	Value
CashFlow	Net Cash Flow	54.19
E1	Discounted net cash flow (E1)	49.27
NPV	Net Present Value	-35.19
Pi	Profitability Index	0.93
IRR	Internal Rate of Return,%	12.99
PP	Payback Period, years	5.38

Financial plan of Fitness Club Arnold Fit (full version)

1. Fixed capital planning

The company Arnold Fit needs to calculate the investments to perform its activity. The company also needs both fixed and working capital to launch business. The fixed capital includes capital assets. First of all Arnold Fit needs buildings to organize the business activity. The balance value of all facilities and buildings amounts to 200.0 k\$. Operating period of facilities is 20.0 years.

The company has to pay 4.0 k\$ for the purchase of vehicles for the internal use and the transportation of goods.

The cost of equipment necessary to start production is 220.0 k\$.

The furniture for office and production space is also a capital asset and is estimated at 30.0 k\$.

The cost of computers is 4.50 k\$.

It's also necessary to purchase appropriate software to ensure an accounting department functioning as well as the overall automation of work. The total amount for this is 7.0 k\$.

Biological assets, library collections and some other items may contribute to the fixed assets. The amount of the other types of the capital assets is 0.50 k\$.

The table below shows the cost of fixed assets necessary to purchase.

Table 1 - The cost of the necessary fixed assets, k\$

Fixed assets:	Cost, k\$	Period of operation, years	Salvage cost, k\$
Buildings	200.0	20.0	2
Vehicles	4.0	5.0	0.04
Equipment	220.0	5.0	2.20
Furniture	30.0	4.0	0.30
Computers	4.50	4.0	0.05
Software	7.0	2.0	0.07
Other	0.50	4.0	0.01
Capital assets	466		

Therefore, the total amount of investments in the fixed assets is 466 k\$. This amount is not included into the company's expenses straight away. It should be written off as depreciation. The given company uses a straight line method of depreciation.

2. Planning of the fixed costs

Operational expenses of any enterprise include:

- material expenses;

- labor costs;
- social costs;
- depreciation;
- other expenses.

2.1. Labor costs

Personnel is needed to perform the business activity. Let's make a planning of the personnel quantity for the next 5 years.

Table 2 - Planning of personnel quantity and salary budget

Indicator	2016	2017	2018	2019	2020
Personnel quantity	2	2	3	3	3
Salary fund, k\$	96	96	180	180	180
Social insurance, k\$	28.80	28.80	54	54	54
Salary budget, k\$	124.80	124.80	234	234	234

The planned salary budget in Arnold Fit for 2016 is 124.80 k\$.

In 2017 it is planned to decrease personnel costs by 0 k\$.

In 2018 it is planned to increase expenses by 109.20 k\$ compared to 2017.

In 2019 it is planned to decrease expenses by 0 k\$ compared to 2018.

Before 2020 the number of employees at Arnold Fit is expected to count 3 staff, while the salary budget amounts to 234 k\$, which decreases by 0 k\$ percent compared to the previous year's indicator.

2.2. Depreciation costs planning

Let's calculate the depreciation costs for the given type of capital for the next 5 years.

Table 3 - Calculation of the depreciation costs of the company's main assets according to a straight line method, k\$

Fixed capital indicator	2016	2017	2018	2019	2020
Buildings and offices	9.90	9.90	9.90	9.90	9.90
Vehicles	0.79	0.79	0.79	0.79	0.79
Equipment	43.56	43.56	43.56	43.56	43.56
Furniture	7.43	7.43	7.43	7.43	0
Computers and office automations	1.11	1.11	1.11	1.11	0
Programs	3.47	3.47	0	0	0
Other types of fixed capital	0.12	0.12	0.12	0.12	0
Total	66.38	66.38	62.91	62.91	54.25

Let's show a way of calculations according to a straight line depreciation method:

Annual amount of depreciation for facilities and buildings is:

$$(200.0 - 2) / 20.0 = 9.90 \text{ k\$}$$

Annual amount of depreciation for vehicles is:

$$(4.0 - 0.04) / 5.0 = 0.79 \text{ k\$}$$

Annual amount of depreciation for equipment is:

$$(220.0 - 2.20) / 5.0 = 43.56 \text{ k\$}$$

Annual amount of depreciation for furniture is:

$$(30.0 - 0.30) / 4.0 = 7.43 \text{ k\$}$$

Annual amount of depreciation for computers is:

$$(4.50 - 0.05) / 4.0 = 1.11 \text{ k\$}$$

Annual amount of depreciation for programs is:

$$(7.0 - 0.07) / 2.0 = 3.47 \text{ k\$}$$

Annual amount of depreciation for other types of fixed capital is:

$$(0.50 - 0.01) / 4.0 = 0.12 \text{ k\$}$$

2.3. Administrative costs planning

A company plans to rent buildings for manufacturing process or offices.

Table 4 - General occupancy expenses for 2016 - 2020

Indicator	2016	2017	2018	2019	2020
Rent costs	1.0	1.10	1.21	1.33	1.46

General occupancy expenses. In 2016 rent costs will be 1.0 k\$. The next year rent costs are expected to increase by 0.10 k\$. However, the planning indicator will be 1.10 k\$ in 2017. In 2018 expenses are planned to increase by 0.11 k\$ compared to 2017. The rent costs amount in 2019 is planned to increase by 0.12 k\$ compared to the previous year indicator. In 2020 it is planned to spend 1.46 k\$ for a rent, thus the indicator increases by 0.13 k\$ compared to 2019.

Table 5 - Advertising costs planning for 2016 - 2020

Indicator	2016	2017	2018	2019	2020
Advertising costs	12.0	14.40	15.84	17.42	19.17

Advertising costs. In 2016 advertising costs will be 12.0 k\$. The next year advertising costs are expected to increase by 2.40 k\$. However, the planning indicator will be 14.40 k\$ in 2017. In 2018 it is planned to increase expenses by 1.44 k\$ compared to 2017. The advertising costs amount in 2019 is planned to increase by 1.58 k\$ compared to the previous year indicator. In 2020 it is planned to spend 19.17 k\$ for an advertising, thus the indicator increase by 1.74 k\$ compared to 2019.

Table 6 - Communication costs planning for 2016 - 2020.

Indicator	2016	2017	2018	2019	2020
Communication costs	2.0	2.20	2.42	2.66	2.93

Communication costs. Company uses the communications to organize its activity. Planning communication costs is 2.0 k\$ in 2016. In 2017 planning costs will increase by 0.20 k\$ compared to previous year. Company plans to spend 2.42 k\$ for Internet and mobile services in 2018. In 2020 it is planned to spend 19.17 k\$ for Internet and mobile services.

Table 7 - Transportation costs planning for 2016 - 2020

Indicator	2016	2017	2018	2019	2020
Transportation costs	1.0	1.20	1.56	1.87	2.06

Transportation costs. In 2016 transportation costs will be 1.0 k\$. In the next year transportation costs are expected to increase by 0.20 k\$. However, the planned indicator will be 1.20 k\$ in 2017. In 2018 it is planned to increase expenses by 0.36 k\$ compared to 2017. The transportation costs amount in 2019 is planned to increase by 0.31 k\$ compared to the previous year indicator. In 2020 it is planned to spend 2.06 k\$ for transportation, thus the indicator increase by 0.19 k\$ compared to 2019.

Table 8 - Accounting services planning for 2016 - 2020

Indicator	2016	2017	2018	2019	2020
Accounting services costs	18.0	21.60	28.08	33.70	37.07

Outsourcing accounting company will provide accounting services for Arnold Fit. Planning costs amount to 18.0 k\$ 2016. In 2017 accounting services costs are expected to be 21.60 k\$. Accounting services costs will be 28.08 k\$ in 2018 is, 33.70 k\$ in 2019 and 37.07 k\$ in 2020.

Table 9 - Utility charges planning for 2016 - 2020.

Indicator	2016	2017	2018	2019	2020
Electricity	30.0	33	36.30	39.93	43.92
Natural gas	1.0	1.10	1.21	1.33	1.46
Central heating	2.0	2.20	2.42	2.66	2.93
Water supply	2.0	2.20	2.42	2.66	2.93
Other utility charges	2.0	2.20	2.42	2.66	2.93
Total amount for utility charges	37	40.70	44.77	49.25	54.17

In 2016 electricity charges are 30.0 k\$. Natural gas charges are 1.0 k\$, heating charges - 2.0 k\$, water supply - 2.0 k\$ and other utility charges are 2.0 k\$. Total amount of utility charges is 37. In 2020 the total amount of utility charges will be 54.17 k\$.

Table 10 - Other costs planning for 2016 - 2020

Indicator	2016	2017	2018	2019	2020
General occupancy	1.0	1.10	1.21	1.33	1.46
Advertising	12.0	14.40	15.84	17.42	19.17
Communications	2.0	2.20	2.42	2.66	2.93

Delivery services	1.0	1.20	1.56	1.87	2.06
Accounting services	18.0	21.60	28.08	33.70	37.07
Utility charges	37	40.70	44.77	49.25	54.17
Total	71	81.20	93.88	106.23	116.86

All the calculations are used to plan the future operation costs. In 2016 the indicator will be 71 k\$, in 2017 - 81.20 k\$, in 2018 - 93.88 k\$, in 2019 - 106.23 k\$, and in 2020 - 116.86 k\$.

2.4. Material expenses

Planned materials-output ratio is 2.0 %. We have to solve an equation to find the total amount of operation costs in 2016:

$$\text{Material expenses} + \text{Salary fund} + \text{Depreciation} + \text{Utility charges} = \text{Operation costs (OC)}$$

$$2.0/100 * \text{OC} + 124.80 + 66.38 + 71 = \text{OC}$$

$$\text{OC} - 2.0/100 * \text{OC} = 262.18$$

$$\text{OC} = 267.53$$

Operation costs in 2016 are 267.53 k\$

Material expenses in 2016 are: $267.53 * 2.0 / 100 = 5.35$ k\$

Operation costs in 2017 are: $272.38 / (1 - 2.0 / 100) = 277.94$ k\$

Material expenses in 2017 are: $277.94 * 2.0 / 100 = 5.56$ k\$

Operation costs in 2018 are: $390.79 / (1 - 2.0 / 100) = 398.77$ k\$

Material expenses in 2018 are: $398.77 * 2.0 / 100 = 7.98$ k\$

Operation costs in 2019 are: $403.15 / (1 - 2.0 / 100) = 411.37$ k\$

Material expenses in 2019 are: $411.37 * 2.0 / 100 = 8.23$ k\$

Operation costs in 2020 are: $405.11 / (1 - 2.0 / 100) = 413.37$ k\$

Material expenses in 2020 are: $413.37 * 2.0 / 100 = 8.27$ k\$

Table 11 - Material expenses planning for 2016 - 2020.

Indicator	2016	2017	2018	2019	2020
Material expenses	5.35	5.56	7.98	8.23	8.27

2.5. Operation costs planning

Indicator	2016	2017	2018	2019	2020
Material expenses	5.35	5.56	7.98	8.23	8.27
Labor expenses	96	96	180	180	180
Social insurance	28.80	28.80	54	54	54

Depreciation	66.38	66.38	62.91	62.91	54.25
Other costs	71	81.20	93.88	106.23	116.86
Total	267.53	277.94	398.77	411.37	413.37

The planned amount of material expenses is 5.35 k\$ in 2016. In the next year the indicator will increase by 0.21 k\$ (increase rate is 3.89%). Material expenses will increase by 2.42 k\$ from 2017 to 2018 amounting to 7.98 k\$. The next year indicator increase by 0.25 k\$ compared to 2018 (increase rate is 3.16%). In 2020 planned material costs are 8.27 k\$, the increase compared to the previous year indicator is 0.04 k\$, increase rate is 0.49%.

In 2016 planned salary fund is 96 k\$. In the next year salary fund is expected to decrease by 0 k\$ (increase rate is 0%). Labor costs will increase by 84 k\$ from 2017 to 2018 and its amount will be 180 k\$.

The planned amount of social expenses is 28.80 k\$ in 2016.

The planned amount of other expenses is 71 k\$ in 2016. In the next year the indicator will increase by 10.20 k\$ (increase rate is 14.37%). Other expenses will increase by 12.68 k\$ from 2017 to 2018 amounting to 93.88 k\$. The next year indicator increases by 12.35 k\$ compared to 2018 (increase rate is 13.16%). In 2020 other planned costs are 116.86 k\$, the increase compared to the previous year indicator is 10.62 k\$, increase rate is 10.00%.

In 2016 planned operation costs are 267.53 k\$. In the next year this costs are expected to increase by 10.41 k\$ (increase rate is 3.89%). Depreciation costs will increase by 120.83 k\$ from 2017 to 2018 and its amount will be 62.91 k\$. The indicator will increase by 12.60 k\$ in the 2019, increase rate will be 3.16%. In 2020 planned operation costs are expected to count 413.37 k\$, increasing by 2.00 k\$ compared to the previous year, increase rate is 0.49%.

3. Planning sources for investment

Apart from investments in fixed assets, the company also needs some other kinds of investments. For instance, the registration of the organization requires the amount of 3.0 k\$. It is also necessary to collect funds for the purchase of raw materials. The predicted amount for this purpose is 2.0 k\$. Additional funds in the amount of 3.0 k\$ are needed to organize mutual payments at the initial stage. To make facilities function well, it is necessary to carry out repair. According to the preliminary estimates repair cost is 30.0 k\$.

It is also necessary to take into account the fact that Arnold Fit will not be able to pay fixed costs at the expense of its revenue during the first month. Therefore it is necessary to create a reserve amount enough to compensate all performance costs for a single month. Since the size of annual costs amounts to 267.53 k\$, the company needs 12.60 k\$ per month.

Thus, the company requires an amount of 516.60 k\$ in the first year including:

- fixed assets - 459 k\$;
- intangible assets - 7.0 k\$;
- stocks 2.0 k\$;
- money on a current account 3.0 k\$;
- capital investments 30.0 k\$;
- additional amount in cash to register the business 3.0 k\$
- reserve capital to repay the costs 12.60 k\$

The company may use both its own capital and the attracted one for the purchase of assets and reimbursement of expenses. Equity is the share capital, due to which assets may be acquired. Arnold Fit's amount of equity is 50.0 k\$. Thus, the organization needs a loan in the amount of 466.60 k\$ (516.60 - 50.0).

Table 13 - Loan amount distribution

Indicator	2016	2017	2018	2019	2020
Loan amount, k\$	116.65	116.65	116.65	116.65	0
Bank interest, k\$	22.65	22.65	22.65	22.65	0
Total debt amount, k\$	139.30	139.30	139.30	139.30	0

Arnold Fit can get a loan for 48.0 months at 9.0% per annum. Thus, the yearly financial costs to repay the loan amount to 139.30 k\$.

4. Planning financial results

4.1. Calculation of break-even point

Break-even point is the amount of income at which the company does not receive losses. To achieve it, the income should exceed expenditures. As it was indicated above, we have calculated the amount of operating expenses. It is also necessary to take the financial costs into account, which are also paid out at the expense of the future incomes.

Table 14 - Planning of total expenses Arnold Fit

Indicator	2016	2017	2018	2019	2020
Operating expenses, k\$	267.53	277.94	398.77	411.37	413.37
Financial expenses, k\$	22.65	22.65	22.65	22.65	0
Total	290.18	300.59	421.42	434.02	413.37

Thus, the break-even point in 2016 is 290.18 k\$, in 2017 - 300.59 k\$, in 2018 - 421.42 k\$, in 2019 - 434.02 k\$, in 2020 - 3413.37 k\$.

Margin is a main source of profit for the company. Arnold Fit establishes the margin of 40.0% for its services. Let's carry out the planning of the company incomes, adding the margin's percentage to the expenses.

Table 15 - Planning of revenues and financial results of Arnold Fit

Indicator	2016	2017	2018	2019	2020
Earnings	406.25	420.82	589.99	607.63	578.72
Costs	290.18	300.59	421.42	434.02	413.37
Profit before tax	116.07	120.24	168.57	173.61	165.35
Income tax	11.61	12.02	16.86	17.36	16.53
Net profit	104.46	108.21	151.71	156.25	148.81

The following conclusions can be made according to the table data. The company will be profitable in the next year. The planned net profit is 104.46 k\$. The calculations took the income tax into account, which will be 10% in 2016.

In 2017, the planned income before tax will amount to 120.24 k\$. Net profit after paying taxes will be 108.21 k\$. A profit growth is planned for the next years, i.e. the growth rate will be 40.20% in 2018, 2.99% in 2019 and -4.76% in 2020. The planned net profit after 5 years is expected to be 148.81 k\$.

4.2. Cash Flow Planning

Table 16 - Cash at the beginning of 2016

Inflow	Outflow
50.0 Own funds were put on the balance	459 Fixed capital was purchased
466.60 Credit funds were put on the balance	7.0 Intangible assets were purchased
12.60 Reserve amount was created to cover the costs	2.0 Commodities and stocks were purchased
	3.0 Spent on company's registration
	30.0 Spent on facility repair
	12.60 Reserve amount was created to cover the costs
529.20 Total, money inflow	513.60 Total, money outflow
15.60 Cash balance before the start of activity	

Table 17 - Cash at the end of 2016

Inflow	Outflow
15.60 Cash balance before the start of activity	
406.25 Revenue from product sales	22.65 Repayment of loan's interest
	96 Staff salaries
	28.80 Payment of social security costs
	71 Payment of other costs
	11.61 Payment of income tax
	5.35 Material expenses
	116.65 Loan repayment
406.25 Total, money inflow	352.06 Total, money outflow
69.79 Cash balance at the end of 2016	

Table 18 - Cash at the end of 2017

Inflow	Outflow
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69.79 Cash balance at the beginning of 2017	
420.82 Revenue from product sales	22.65 Repayment of loan's interest
	96 Staff salaries
	28.80 Payment of social security costs
	81.20 Payment of other costs
	12.02 Payment of income tax
	5.56 Material expenses
	116.65 Loan repayment
420.82 Total, money inflow	362.88 Total, money outflow
127.74 Cash balance at the end of 2017	

5. Investment project effectiveness

Calculation of the following economic indicators is performed to assess the effectiveness of the project:

- net present value;
- profitability index;
- payback period;
- internal rate of return on investment.

To obtain the required figures, it's necessary to calculate the cash flows of Arnold Fit.

Table 19 - Cash flows of Arnold Fit for 2016 - 2020

indicator	2016	2017	2018	2019	2020	Total for 2016 - 2020
Positive cash flow	406.25	420.82	589.99	607.63	578.72	2603.42
Negative cash flow	352.06	362.88	492.01	505.12	375.66	2087.73
Net cash flow	54.19	57.94	97.98	102.51	203.07	515.69

Let's perform the cash flows discounting, calculating the discount rate in advance.

While assessing the viability of investments a discount rate or a capitalization rate is set, i.e. an interest rate, which characterizes the indicator of a minimal annual income at which the investor is willing to invest. Discount rate helps determine a special discounting coefficient based on the formula of compound interest in order to bring investments and cash flows of different years to a present time.

Discount rate in its broad meaning represents the opportunity expenses in the fixed assets and expresses the rate of profit, which company would get from alternative investments.

A discounting coefficient at for a constant rate of discount E is determined according to the formula:

$$i = 1 / (1-E)^t$$

Discounting rate (i) represents the value of the attracted capital (or a total cash flow), under which the investor is willing to invest in business;

E - constant discount rate;

t - period of time;

Table 20 - Calculation of the discounting rate

Period (t)	Constant discount rate (E)	Discounting rate (i)
1	10	1.10
2	10	1.21
3	10	1.33
4	10	1.46
5	10	1.61

Let's perform the discounting of cash flows for Arnold Fit.

The discount rate is a key element in the process of income discounting. It shows what rate of return the investor should take into account when investing in a given investment project. The discount rate uses many factors, which depend on the object of the evaluation and may include an inflationary component, a return on risk-free assets, the additional risk premium, the refinancing rate, the weighted average cost of capital, interest on bank deposits, etc.

$$DCF = CF / (1+r)^t$$

Table 21 - Discounting of Arnold Fit cash flows

Indicator	2016	2017	2018	2019	2020	Total for 2016 - 2020
Discounted positive cash flow	369.32	382.57	536.35	552.39	526.11	2366.75
Discounted net profit	94.97	89.43	113.98	106.72	92.40	497.50
Discounted net cash flow	49.27	52.67	89.07	93.19	184.61	468.81

One of the most effective ways to assess the effectiveness of the investment project is the calculation of the net present value (NPV), which is based on a comparison of the value of the invested capital (IC) with a total amount of the discounted net cash flow generated within a given period.

Discounted rate is set by the analysts based on the planned rate of return. In this case the percentage of return is 10 %.

NPV is calculated using the following formula:

$$NPV = CF - IC$$

NPV- the amount of net present value for the real investment project;

CF - the amount of net cash flow (discounted to the present value) for the entire operation period of the investment project (prior to the new investments in its reconstruction or modernization). If the full operation period of the object before the new investment is made is difficult to determine, the period of 5 years is taken into consideration;

IC - the amount of capital invested in the implementation of the given project (discounted to present value if the investments are made in various periods).

$$\text{Net Present Value (NPV)} = 468.81 - 504.0 = -35.19 \text{ k\$}$$

Profitability Index (PI) is a measure of the investment effectiveness. This is the ratio of the discounted income to the amount of investment capital. There are also other synonyms of the profitability index, which have the same economic sense like the present value index and the index of profitability of the investment projects.

$$PI = NPV / IC$$

$$\text{Profitability Index (PI)} = 468.81 / 504.0 = 0.93$$

Payback Period (PP) is an indicator that characterizes the period for which the invested capital will bring income.

$$\text{Payback Period (PP)} = 504.0 / (468.81 / 5) = 5.38 \text{ years.}$$

Internal Rate of Return (IRR) is the rate of return that was received from investments. This is the rate of return at which the net present value of the investment is equal to zero, or it is the discount rate at which the discounted income of the project is equal to the investment costs. The internal rate of return determines the maximal acceptable discount rate at which it's possible to invest without any loss for the owner.

$$IRR = r, \text{ when } NPV = f(r) = 0,$$

Let's perform the calculation of the internal rate of return. To do this, we'll specify the upper possible limit of the discount rate which is adopted at a level of 10%. Let's assume that the upper threshold of the indicator is 15%.

Now let's perform the net cash flow discounting according to the upper limit of the discount rate.

Table 22 - Cash flow discounting using a successive approximation method

Indicator	2016	2017	2018	2019	2020	Total
Net cash flow	54.19	57.94	97.98	102.51	203.07	515.69
Discounted net cash flow (E1)	49.27	52.67	89.07	93.19	184.61	468.81
Discounted net cash flow (E2)	47.13	43.81	64.42	58.61	100.96	314.93

$$IRR = 10 + (15 - 10) * 468.81 / (468.81 - (314.93)) = 12.99\%$$

Table 23 – Business Plan Performance Indicators for Arnold Fit

	Indicator	Value
CashFlow	Net Cash Flow	54.19
E1	Discounted net cash flow (E1)	49.27
NPV	Net Present Value	-35.19
Pi	Profitability Index	0.93
IRR	Internal Rate of Return,%	12.99
PP	Payback Period, years	5.38

6. Planned assets structure of Arnold Fit

Arnold Fit Balance sheet

ASSETS	01.01.2016	31.12.2016	31.12.2017	31.12.2018	31.12.2019
Current assets	x	x	x	x	x
Cash	15.60	69.79	127.74	225.71	328.22
Supplies	2.0	2.0	2.0	2.0	2.0
Total current assets	17.60	71.79	129.74	227.71	330.22
Investments	30.0	30.0	30.0	30.0	30.0
Property, plant and equipment	459	396.09	333.17	270.26	207.34
Intangible assets	7.0	3.54	0.07	0.07	0.07
LIABILITIES	x	x	x	x	x
Interest payable	466.60	349.95	233.30	116.65	0.00
Total current liabilities	466.60	349.95	233.30	116.65	0.00
STOCKHOLDERS' EQUITY	x	x	x	x	x
Common stock	50.0	50.0	50.0	50.0	50.0
Retained earnings	-3	101.46	209.68	361.39	517.64
Total liabilities & stockholders' equity	47	151.46	259.68	411.39	567.64
TOTAL ASSETS	513.60	501.41	492.98	528.04	567.64

WACC (Weighted Average Cost of Capital) is the indicator used while assessing the need for investment in various securities, projects as well as discounting the expected investment income and the cost of measuring the company's capital. It shows a firm's cost of capital in which each category of capital is proportionately weighted.

WACC = (Stockholders' equity * Discounting rate + Liabilities * Credit rate * (1- Income tax)) / Assets

Let's perform the calculation of the indicator for 01.01.2017 :

$$\text{WACC} = (151.46 * 10 + 349.95 * 9.0 * (1 - 0.2)) / 501.41 = 8.05 \%$$

Thus, the weighted average cost of capital of : Arnold Fit is :

8.05% in 2017;

8.67% in 2018;

9.38% in 2019;

10.00% in 2020.

Foreign and domestic economists consider financial leverage one of the main indicators of the impact of capital structure on profitability.

The indicator that reflects the level of additional profit on the own capital under various options of the capital structure is called the degree of financial leverage. It is calculated according to the formula:

$$DFL = (1-ITR) * (ROA- LIR) * AC/ OC$$

ITR - income tax rate;

ROA - return on assets,%;

LIR- loan interest rate,%;

AC- average amount of the attracted capital;

OC - average amount of the own capital.

Let's analyze the impact of financial leverage on the company's final results and the owners interests.

The data provided by the Table are used for the analysis.

Table 24 - Impact of financial leverage on the final performance results of Arnold Fit for 2016 - 2020

Indicator	01.01.2016	31.12.2016	31.12.2017	31.12.2018	31.12.2019
Income tax rate, %	20%	20%	20%	20%	20%
Net profit, k\$	104.46	108.21	151.71	156.25	148.81
Average assets value, k\$	507.51	497.20	510.51	547.84	567.64
Loan interest rate, %	9.0	9.0	9.0	9.0	9.0
Own capital, k\$	47	151.46	259.68	411.39	567.64
Attracted capital, k\$	466.60	349.95	233.30	116.65	0.00
Return on assets (ROA)	0.21	0.22	0.30	0.29	0.26
Differentiation of financial leverage	0.12	0.13	0.21	0.20	0.17
Tax correction	0.8	0.8	0.8	0.8	0.8
Financial leverage shoulder (FLS)	9.93	2.31	0.90	0.28	0.00
Degree of financial leverage (DFL)	0.92	0.24	0.15	0.04	0.00

Thus, we can conclude that the investment policy is profitable, financial leverage shows by how many percent the return on equity will increase at the expense of credit funds attracted to the circulation.

Conclusions

Money is needed first of all to implement the business idea. Arnold Fit has its own funds amounting to 50.0 k\$, but they are not enough to realize the investment project.

It's necessary to make an investment plan in order to determine how much money should be borrowed. The first stage requires calculate the amount of capital investments including the purchase of the facilities, vehicles, equipment and so on.

The amount of capital investment is 459 k\$. In addition to capital investments, it is also necessary to invest in stocks that will be used for the production purposes. The required amount of stocks necessary to launch a business is 2.0k\$.

Additionally, a certain amount is needed to register the company. The total investment amounts to 504.0k\$.

The main task when starting an own business is to cross the break-even threshold. To find out the break-even point, the amount of expenses should be planned carefully.

To organize the activity, it is necessary to involve additional labor resources. The number of staff in the early stages will be 2 employees. If the average salary in the initial stages of activity is planned to be 4.0 k\$, then the annual salary expenses would amount to 124.80 k\$.

Materials are necessary to produce any goods or services. Planned material consumption is 2.0, i.e. the planned cost of materials per year is 5.35 k\$. Depreciation costs are a gradual reducing of the cost of the acquired fixed assets. According to the calculations they amount to 66.38 k\$.

Other expenses include paying taxes, utility bills and possible payment for the lease of facilities, transportation, selling expenses. The total amount of the other expenses is planned to be 71 k\$.

Thus, having calculated all the costs, we can determine the break-even point. It amounts to 290.18 k\$ in the planning period.

The preliminary assessment of the market and the power of Arnold Fit makes it possible to estimate that such kind of income is real with a great percentage of possibility, that's why the company decided to attract credit funds for 48.0 months at 9.0% per annum.

According to preliminary estimates the planned revenue of the Arnold Fit should be 406.25 k\$, that makes it possible to receive a net profit of 104.46 k\$.

Evaluation of the investment project effectiveness has shown that under given forecasts a payback period is 5.38 years while a net present value is -35.19 k\$ for a period of 5 years.

As a result of the forecasts, the capital value is expected to be 501.41 k\$ in 2017, while a share of the own capital amounts to 151.46 k\$. By 2020 the planned capital value is expected to be 567.64 k\$. The average weighted cost of capital will be 10.00%.

