



Richard Ferrers · Mar 22, 2018

<http://au.linkedin.com/pub/richard-ferrers/27/b1/603>
 Fork of NBN Financials - from 2021 (V5) on...

NBN Financials - from 2021 on...

Version 5a. For explanations, click Version 5 below.

This is the model **WITHOUT EXPLANATIONS**.

Link to [Base Case v1](#) | [Version 5](#) with explanations | Final Version (coming soon).
 AMENDED EOL FTTN so calcs pick up global variable, show post-FTTN NBN value, debt repayment offsetting op.bal., pro rata upgrade to FTTN to 100% (check calc; add divide by zero catch) 23,27.3.18.

0.1 Setup.

Number of post 2020 years for NBN analysis:

20

Integers from zero through 40

NBN CASHFLOW discount rate:

5

Integers from zero through 20. Used in DCF calc.

NBN Debt repayment rate: (% of annual cash surplus)

0

Integers from zero through 100. Priority spend over FTTN upgrade.

NBN/FTTN Upgrade: more FTTC or more FTTP

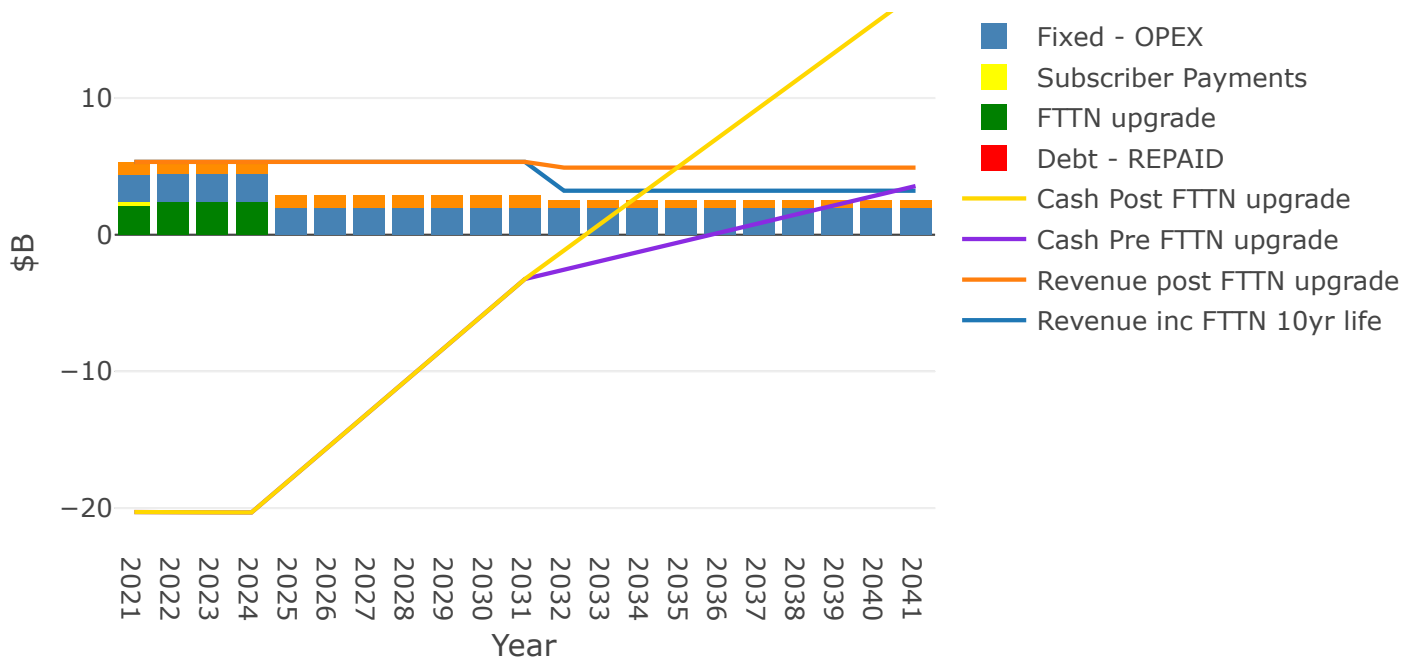
50

Integers from zero (all FTTC) through 100 (all FTTP); only works once add to Upgrade Reserve below

NBN Financials 2021 - on



Variable - OPEX



p.a. Revenue	Expenses	PROFIT(EBITDA)	VALUE NBN YR20	Pay Debt back (Min.Yrs)
\$B 5.33	2.89	2.44	\$B 4	8.32

p.a. Revenue	Expenses	PROFIT(EBITDA)	DCF CASH	Post FTTN (End Of Life Yr 10)
\$B 3.22	2.54	0.68	4.2	NBN GDP impact=\$B 182 FTTN Upgrade Reserve: To Calc

p.a. Revenue	Expenses	PROFIT(EBITDA)	DCF CASH	Post FTTN Upgrade Yr20
\$B 4.91	2.82	2.09	10.89	NBN GDP impact=\$B 215 Post FTTN NBN Value: \$B 18

1.Active Analysis tools

Non-NBN Users% (post 2020 ie mobile only):

27

Integers from zero through 100% - est'd. 26.5% at 2021

NBN Customer Satisfaction:

60

Integers from zero through 100. Low scores indicate customer/s leaving ($x < 40$) or spending less ($x < 60$) NBN. See more at Section 1.4.

NBN % adopters of Ultra-broadband (>1Gbps etc.):

0

Integers from zero through 100. High scores indicate higher revenue for NBN. No impact on CAPEX or OPEX-fix.

NBN Users who abandon FTTN at Technology End of Life (10yrs):

100

Integers from zero through 100. Higher scores indicate customer/s leaving NBN. - implemented for FTTN

- **NBN/FTTN Upgrade: % free cash added to FTTN upgrade reserve**

100

Integers from zero through 100 - implemented for FTTN

Useful life of FTTN; (years)

10

Sections 1.0-1.3 omitted.

1.4 Impact of Customer Satisfaction on NBN.

On a five point scale, how happy are you with the NBN?

Very Unhappy | Unhappy | Neutral | Happy | Very Happy.

Relates to delay to install, service, reliability, help fixing problems, price etc.

Impact:

- Lower satisfaction increases switching to mobile only, less revenue, minimising use.
- Higher satisfaction increases revenue, increases power usage, decreases switching to mobile only.

	Very🔴	🟡:-(😊:~	😊:~)	Very🔴	Status
% mobile	+20%	+10%	-	-	-10%	DONE v4
% power Users (M)	-	-	-	+10%	+20%	DONE v4
Revenue (M)	-50%	-20%	-10%	-	+10%	DONE v4

Possible: levels of satisfaction: 😊❤️😞😡😇😊 | Possible revision: add CSat by Tech.

2.BaseCase Data and calculations - amended by slider choices.

2.44

0.68

2.09

EBITDA(cash profit) \$B | EBITDA (after FTTN end of life) | EBITDA (after FTTN upgrade to FTTC or FTTP)

►Array(21) [5.33, 5.33, 5.33, 5.33, 5.33, 5.33, 5.33, 5.33, 5.33, 5.33, 5.33, 5.33, 3.

- -1

- Non-NBN Users; PER CENT Revenue change from project NBN activated by 2021; est'd 8.6M of 11.7M passed.

- -20.3

- CASH balance at end of NBN Build in 2020 (\$B)

- ▶Array(21) [2021, 2022, 2023, 2024, 2025, 2026, 2027, 2028, 2029, 2030, 2031, 2032, 2033, 2034, 2035, 2036, 2037, 2038, 2039, 2040, 2041]

- ▶Array(21) [-20.29, -20.3, -20.31, -20.32, -17.88, -15.44, -13, -10.56, -8.12, -6.12, -4.12, -2.12, -0.12, 0.12, 0.32, 0.52, 0.72, 0.92, 1.12, 1.32, 1.52]

- CASH adjusted for opening balance, REVENUE, OPEX variable adjusted by mobile non-NBN users, customer satisfaction, FTTN end of life, adoption of Ultra-broadband (gbps), debt repayment, FTTN capex upgrades.

- ▶Array(21) [2, ...]

- FixedOPEX adjusted by EOLife change. Optional amend for FTTN abandoners at end of life (status = OFF).

- ▶Array(21) [0.89, 0.89]

- VariableOPEX adjusted by REVENUE, EOLife change, Customer Satisfaction. EXTRA for PowerUSERS

- ▶Array(21) [0, ...]

- Debt Repayments; based on % of cash surplus selected.

- ▶Array(21) [2.14, 2.44, 2.44, 2.44, 2.44, 2.44, 2.44, 2.44, 2.44, 2.44, 2.44, 2.44, 2.44, 2.44, 2.44, 2.44, 2.44, 2.44, 2.44, 2.44, 0.14]

- Accumulated CAPEX funds put aside for upgrading FTTN; based on % of cash surplus selected.

2.1 Calculations for FTTN upgrade to FTTC or FTTP.

- ▶Array(21) [0.37, 0.42, 0.42, 0.42, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0]

- ▶Array(21) [0.37, 0.42, 0.42, 0.42, 0.37, 0.42, 0.42, 0.42, 0.37, 0.42, 0.42, 0.42, 0.37, 0.42, 0.42, 0.42, 0.37, 0.42, 0.42, 0.42, 0.37]

```
►Array(21) [0.24, 0.28, 0.28, 0.28, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0]
-
►Array(21) [2.13, 2.45, 2.45, 2.45, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0]
-
►Array(21) [0.61, 1.31, 2.01, 2.71, 2.71, 2.71, 2.71, 2.71, 2.71, 2.71, 2.71, 2.71, 2.71, 2.71, 2.71, 2.71, 2.71, 2.71, 2.71, 2.71, 2.71, 2.71]
-
►Array(21) [0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, ...]
-
►Array(21) [5.33, 5.33, 5.33, 5.33, 5.33, 5.33, 5.33, 5.33, 5.33, 5.33, 5.33, 5.33, 5.33, 5.33, 5.33, 5.33, 5.33, 5.33, 5.33, 5.33, 5.33, 4.67]
-
►Array(21) [0.89, 0.89, 0.89, 0.89, 0.89, 0.89, 0.89, 0.89, 0.89, 0.89, 0.89, 0.89, 0.89, 0.89, 0.89, 0.89, 0.89, 0.89, 0.89, 0.89, 0.89, 0.89]
-
►Array(21) [-20.29, -20.3, -20.31, -20.32, -17.88, -15.44, -13, -10.56, -8.12, -5.68, -3.24, -0.8, 1.64, 4.08, 6.52, 8.96, 11.4, 13.84, 16.28, 18.72, 21.16, 23.6]
```

Testing FTTN upgrade formula

3.BASE CASE Data:

```
►Array(1) [2021]
-
►Array(1) [5.37]
-
►Array(1) [2]
-
►Array(1) [0.9]
-
►Array(1) [0.3]
```

2900

4400

4.Setup:

```
►Object {version: "1.35.2", register: f (t), plot: f (t, r, n, i), newPlot: f (t, r, n, i), ...}
-
►Object {event: null, format: f n(t), formatPrefix: f formatPrefix(t, e), timeFc
```

```
-  
import @jashkenas/inputs
```

```
-  
f myRound(name)
```

```
-  
f npv(myArray, rate)
```

```
-  
f calcGDP(myArray, rate)
```

```
-  
0.9925512104283054  
-
```

4.1 Calc NPV / GDP

```
-  
4.204556508292445  
-
```

```
-  
10.888626841123244  
-
```

```
-  
181.65999999999997  
-
```

```
-  
215.45999999999992  
-
```

