

eisenberg-noe-2001-debt-model-with-default-costs

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DEBT MODEL WITH DEFAULT COSTS

ALPHA = 1 and BETA = 1

Running Debt Model to find Greatest Clearing Vector in MANUAL mode with 3 nodes...

Scenario 3 - Firm B defaults in first round, Firm A in second round, algorithm terminates round 3, MODE == 'MANUAL', NUM_AGENTS = 3, NOMINAL_LIABILITY_MATRIX = np.array([[0,2,9],[7,0,9],[3,1,0]]), OPERATING_CASH_FLOW_VECTOR = [3, 0, 4], and implicitly ALPHA=BETA=1
Shock value is 8

AGENT LABELS

Agent labels ['A', 'B', 'C']

NOMINAL LIABILITY MATRIX Data Frame

i.e. what node i expects (row) to pay node j (column)...

	A	B	C
A	0	2	9
B	7	0	9
C	3	1	0

Nominal liabilities for each node:

Liability of Node A to Node B is 2
Liability of Node A to Node C is 9
Liability of Node B to Node A is 7
Liability of Node B to Node C is 9
Liability of Node C to Node A is 3
Liability of Node C to Node B is 1

NOMINAL LIABILITY MATRIX TRANSPOSED Data Frame
i.e. what node j expects to receive from i...

	A	B	C
A	0	7	3
B	2	0	1
C	9	9	0

Node A expects to receive 7 from Node B
Node A expects to receive 3 from Node C
Node B expects to receive 2 from Node A
Node B expects to receive 1 from Node C
Node C expects to receive 9 from Node A
Node C expects to receive 9 from Node B

OPERATING CASH FLOW VECTOR

Exogenous cash flow for Node A: 3
Exogenous cash flow for Node B: 0
Exogenous cash flow for Node C: 4
[3, 0, 4]

CALCULATING RELATIVE LIABILITIES FOR EACH NODE

Node A

- Liabilities for Node A

Liability of Node A to Node B (i.e. P_01) is 2.0

Liability of Node A to Node C (i.e. P_02) is 9.0

- Total obligations for Node A

Total Obligation Vector updated in round 1 for Node A with value 11.0

Total nominal liabilities for Node A (i.e. p_bar_1) is 11.0

- Relative Liabilities of Node A

Relative Liability of Node A to Node B is 0.181818181818182

Relative Liability of Node A to Node C is 0.81818181818182

Sum of Relative Liabilities for Node A is 1.0

Node B

- Liabilities for Node B

Liability of Node B to Node A (i.e. P_10) is 7.0

Liability of Node B to Node C (i.e. P₁₂) is 9.0

- Total obligations for Node B

Total Obligation Vector updated in round 1 for Node B with value 16.0

Total nominal liabilities for Node B (i.e. p_{bar}₂) is 16.0

- Relative Liabilities of Node B

Relative Liability of Node B to Node A is 0.4375

Relative Liability of Node B to Node C is 0.5625

Sum of Relative Liabilities for Node B is 1.0

Node C

- Liabilities for Node C

Liability of Node C to Node A (i.e. P₂₀) is 3.0

Liability of Node C to Node B (i.e. P₂₁) is 1.0

- Total obligations for Node C

Total Obligation Vector updated in round 1 for Node C with value 4.0

Total nominal liabilities for Node C (i.e. p_{bar}₃) is 4.0

- Relative Liabilities of Node C

Relative Liability of Node C to Node A is 0.75

Relative Liability of Node C to Node B is 0.25

Sum of Relative Liabilities for Node C is 1.0

RELATIVE LIABILITY MATRIX Data Frame

	A	B	C
A	0.0000	0.181818	0.818182
B	0.4375	0.000000	0.562500
C	0.7500	0.250000	0.000000

RELATIVE LIABILITY MATRIX Data Frame SANITY CHECK

	A	B	C	Relative Liability Total	CORRECT VALUE?
A	0.0000	0.181818	0.818182	1.0	True
B	0.4375	0.000000	0.562500	1.0	True
C	0.7500	0.250000	0.000000	1.0	True

RELATIVE LIABILITY MATRIX TRANSPOSED Data Frame

i.e. what node i (row) expects to receive from node j (column) in relative terms...

	A	B	C
A	0.000000	0.4375	0.75
B	0.181818	0.0000	0.25
C	0.818182	0.5625	0.00

Expected nominal payments in for Node A - both proportion and total amount

Node A expects to receive proportion 0.4375 from Node B

Node A expects to receive proportion 0.75 from Node C

Total payments in to Node A is 10.0 in round 1.

Expected nominal payments in for Node B - both proportion and total amount

Node B expects to receive proportion 0.18181818181818182 from Node A

Node B expects to receive proportion 0.25 from Node C

Total payments in to Node B is 3.0 in round 1.

Expected nominal payments in for Node C - both proportion and total amount

Node C expects to receive proportion 0.8181818181818182 from Node A

Node C expects to receive proportion 0.5625 from Node B

Total payments in to Node C is 18.0 in round 1.

START OF ROUND 1

TOTAL OBLIGATION VECTOR - round 1

i.e. total nominal obligations for each node i.e. \bar{p}_i ...

Total nominal obligation for Node A (i.e. \bar{p}_1): 11.0

Total nominal obligation for Node B (i.e. \bar{p}_2): 16.0

Total nominal obligation for Node C (i.e. \bar{p}_3): 4.0

TOTAL PAYMENT MADE PER NODE - round 1

i.e. $\min[\text{nominal obligations, cashflow (payments in + exogenous cash flow)}]$ for each node...

Node A

- Total payments in for Node A

Total payments in to Node A is 10.0 in round 1.

- Liabilities for Node A

Liability of Node A to Node B (i.e. P_{01}) is 2.0

Liability of Node A to Node C (i.e. P_{02}) is 9.0

- Total obligations for Node A

Total nominal liabilities for Node A (i.e. p_{bar_1}) is 11.0

Payment out is $\min[\text{payment out, total cash flow}]$ i.e. $\min[11.0, 13.0]$

- Total Dollar Payment Vector for round 1 and Node A

Total Dollar Payment Vector for round 1 and Node A updated with value 11.0

Node B

- Total payments in for Node B

Total payments in to Node B is 3.0 in round 1.

- Liabilities for Node B

Liability of Node B to Node A (i.e. P_{10}) is 7.0

Liability of Node B to Node C (i.e. P_{12}) is 9.0

- Total obligations for Node B

Total nominal liabilities for Node B (i.e. p_{bar_2}) is 16.0

Payment out is $\min[\text{payment out, total cash flow}]$ i.e. $\min[16.0, 3.0]$

Total payments in to Node B is 3.0 in round 1.

Total payments in to Node B is 3.0 in round 1.

Total payments in to Node B is 3.0 in round 1.

Round 1 and Node B has defaulted due to nominal obligations 16.0 being greater than cash flow 3.0. Default loss for Node B is 0.0

- Total Dollar Payment Vector for round 1 and Node B

Total Dollar Payment Vector for round 1 and Node B updated with value 3.0

Node C

- Total payments in for Node C

Total payments in to Node C is 18.0 in round 1.

- Liabilities for Node C

Liability of Node C to Node A (i.e. P_{20}) is 3.0

Liability of Node C to Node B (i.e. P_{21}) is 1.0

- Total obligations for Node C

Total nominal liabilities for Node C (i.e. p_{bar_3}) is 4.0

Payment out is $\min[\text{payment out}, \text{total cash flow}]$ i.e. $\min[4.0, 22.0]$

- Total Dollar Payment Vector for round 1 and Node C

Total Dollar Payment Vector for round 1 and Node C updated with value 4.0

TOTAL PAYMENT VECTOR - round 1

Total payment by Node A (i.e. p_1): 11.0

Total payment by Node B (i.e. p_2): 3.0

Total payment by Node C (i.e. p_3): 4.0

[11.0, 3.0, 4.0]

UPDATE EQUITY (i.e. BOOK VALUE) FOR EACH NODE - round 1

Node A

Total operating cash flow (exogenous assets) 3.0.

Total payments in to Node A is 10.0 in round 1.

Total dollar payment (i.e. liabilities) by Node A (i.e. p_1) is 11.0

Equity Vector for round 1 and Node A

Equity Vector for round 1 and Node A updated with value 2.0 i.e. total cash flow 13.0 minus total payments out (liabilities) 11.0.

Node B

Total operating cash flow (exogenous assets) 0.0.

Total payments in to Node B is 3.0 in round 1.

Total dollar payment (i.e. liabilities) by Node B (i.e. p_2) is 3.0

Equity Vector for round 1 and Node B

Equity Vector for round 1 and Node B updated with value 0.0 i.e. total cash flow 3.0 minus total payments out (liabilities) 3.0.

Node C

Total operating cash flow (exogenous assets) 4.0.

Total payments in to Node C is 18.0 in round 1.

Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0

Equity Vector for round 1 and Node C

Equity Vector for round 1 and Node C updated with value 18.0 i.e. total cash flow 22.0 minus total payments out (liabilities) 4.0.

EQUITY FOR EACH NODE - round 1

Equity for Node A: 2.0
Equity for Node B: 0.0
Equity for Node C: 18.0
[2.0, 0.0, 18.0]

ROUND 1 DEFAULTERS

Node B has defaulted in round 1
{'A': False, 'B': True, 'C': False}
There are defaulters in this round (i.e. round 1), algorithm will proceed for another round.

END OF ROUND 1

START OF ROUND 2

TOTAL OBLIGATION VECTOR - round 2

i.e. total nominal obligations for each node i.e. p_{bar_i} ...
Total nominal obligation for Node A (i.e. p_{bar_1}): 11.0
Total nominal obligation for Node B (i.e. p_{bar_2}): 16.0
Total nominal obligation for Node C (i.e. p_{bar_3}): 4.0

TOTAL PAYMENT MADE PER NODE - round 2

i.e. $\min[\text{nominal obligations, cashflow (payments in + exogenous cash flow)}]$ for each node...

Node A

- Total payments in for Node A
Relative Payment in to Node A from Node B is 0.4375

Total dollar payment (i.e. liabilities) by Node B (i.e. p_2) is 3.0
Relative Payment in to Node A from Node C is 0.75
Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0
Total payments in to Node A is 4.3125 in round 2.

- Liabilities for Node A

Liability of Node A to Node B (i.e. P_{01}) is 2.0
Liability of Node A to Node C (i.e. P_{02}) is 9.0
Total nominal liabilities for Node A (i.e. p_{bar}_1) is 11.0

Payment out is $\min[\text{payment out}, \text{total cash flow}]$ i.e. $\min[11.0, 7.3125]$
Relative Payment in to Node A from Node B is 0.4375
Total dollar payment (i.e. liabilities) by Node B (i.e. p_2) is 3.0
Relative Payment in to Node A from Node C is 0.75
Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0
Total payments in to Node A is 4.3125 in round 2.
Relative Payment in to Node A from Node B is 0.4375
Total dollar payment (i.e. liabilities) by Node B (i.e. p_2) is 3.0
Relative Payment in to Node A from Node C is 0.75
Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0
Total payments in to Node A is 4.3125 in round 2.
Relative Payment in to Node A from Node B is 0.4375
Total dollar payment (i.e. liabilities) by Node B (i.e. p_2) is 3.0
Relative Payment in to Node A from Node C is 0.75
Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0
Total payments in to Node A is 4.3125 in round 2.
Round 2 and Node A has defaulted due to nominal obligations 11.0 being greater than cash flow 7.3125. Default loss for Node A is 0.0

- Total Dollar Payment Vector for round 2 and Node A

Total Dollar Payment Vector for round 2 and Node A updated with value 7.3125

Node B

- Total payments in for Node B

Relative Payment in to Node B from Node A is 0.18181818181818182
Total dollar payment (i.e. liabilities) by Node A (i.e. p_1) is 11.0
Relative Payment in to Node B from Node C is 0.25
Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0
Total payments in to Node B is 3.0 in round 2.

- Liabilities for Node B

Liability of Node B to Node A (i.e. P_{10}) is 7.0
Liability of Node B to Node C (i.e. P_{12}) is 9.0
Total nominal liabilities for Node B (i.e. p_{bar}_2) is 16.0

Payment out is $\min[\text{payment out}, \text{total cash flow}]$ i.e. $\min[16.0, 3.0]$
Relative Payment in to Node B from Node A is 0.18181818181818182

Total dollar payment (i.e. liabilities) by Node A (i.e. p_1) is 11.0
 Relative Payment in to Node B from Node C is 0.25
 Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0
 Total payments in to Node B is 3.0 in round 2.
 Relative Payment in to Node B from Node A is 0.181818181818182
 Total dollar payment (i.e. liabilities) by Node A (i.e. p_1) is 11.0
 Relative Payment in to Node B from Node C is 0.25
 Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0
 Total payments in to Node B is 3.0 in round 2.
 Relative Payment in to Node B from Node A is 0.181818181818182
 Total dollar payment (i.e. liabilities) by Node A (i.e. p_1) is 11.0
 Relative Payment in to Node B from Node C is 0.25
 Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0
 Total payments in to Node B is 3.0 in round 2.
 Round 2 and Node B has defaulted due to nominal obligations 16.0 being greater
 than cash flow 3.0. Default loss for Node B is 0.0

- Total Dollar Payment Vector for round 2 and Node B
 Total Dollar Payment Vector for round 2 and Node B updated with value 3.0

Node C

- Total payments in for Node C
 Relative Payment in to Node C from Node A is 0.8181818181818182
 Total dollar payment (i.e. liabilities) by Node A (i.e. p_1) is 11.0
 Relative Payment in to Node C from Node B is 0.5625
 Total dollar payment (i.e. liabilities) by Node B (i.e. p_2) is 3.0
 Total payments in to Node C is 10.6875 in round 2.

- Liabilities for Node C
 Liability of Node C to Node A (i.e. P_20) is 3.0
 Liability of Node C to Node B (i.e. P_21) is 1.0
 Total nominal liabilities for Node C (i.e. p_bar_3) is 4.0

Payment out is min[payment out, total cash flow] i.e. min[4.0, 14.6875]

- Total Dollar Payment Vector for round 2 and Node C
 Total Dollar Payment Vector for round 2 and Node C updated with value 4.0

TOTAL PAYMENT VECTOR - round 2

Total payment by Node A (i.e. p_1): 7.3125
 Total payment by Node B (i.e. p_2): 3.0
 Total payment by Node C (i.e. p_3): 4.0
 [7.3125, 3.0, 4.0]

UPDATE EQUITY (i.e. BOOK VALUE) FOR EACH NODE - round 2

Node A

Total operating cash flow (exogenous assets) 3.0.
Relative Payment in to Node A from Node B is 0.4375
Total dollar payment (i.e. liabilities) by Node B (i.e. p_2) is 3.0
Relative Payment in to Node A from Node C is 0.75
Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0
Total payments in to Node A is 4.3125 in round 2.
Total dollar payment (i.e. liabilities) by Node A (i.e. p_1) is 7.3125
Equity Vector for round 2 and Node A
Equity Vector for round 2 and Node A updated with value 0.0 i.e. total cash flow
7.3125 minus total payments out (liabilities) 7.3125.

Node B

Total operating cash flow (exogenous assets) 0.0.
Relative Payment in to Node B from Node A is 0.181818181818182
Total dollar payment (i.e. liabilities) by Node A (i.e. p_1) is 11.0
Relative Payment in to Node B from Node C is 0.25
Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0
Total payments in to Node B is 3.0 in round 2.
Total dollar payment (i.e. liabilities) by Node B (i.e. p_2) is 3.0
Equity Vector for round 2 and Node B
Equity Vector for round 2 and Node B updated with value 0.0 i.e. total cash flow
3.0 minus total payments out (liabilities) 3.0.

Node C

Total operating cash flow (exogenous assets) 4.0.
Relative Payment in to Node C from Node A is 0.81818181818182
Total dollar payment (i.e. liabilities) by Node A (i.e. p_1) is 11.0
Relative Payment in to Node C from Node B is 0.5625
Total dollar payment (i.e. liabilities) by Node B (i.e. p_2) is 3.0
Total payments in to Node C is 10.6875 in round 2.
Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0
Equity Vector for round 2 and Node C
Equity Vector for round 2 and Node C updated with value 10.6875 i.e. total cash
flow 14.6875 minus total payments out (liabilities) 4.0.

EQUITY FOR EACH NODE - round 2

Equity for Node A: 0.0
Equity for Node B: 0.0
Equity for Node C: 10.6875

[0.0, 0.0, 10.6875]

ROUND 2 DEFAULTERS

Node A has defaulted in round 2

{'A': True, 'B': True, 'C': False}

There are defaulters in this round (i.e. round 2), algorithm will proceed for another round.

END OF ROUND 2

START OF ROUND 3

TOTAL OBLIGATION VECTOR - round 3

i.e. total nominal obligations for each node i.e. p_{bar_i}

Total nominal obligation for Node A (i.e. p_{bar_1}): 11.0

Total nominal obligation for Node B (i.e. p_{bar_2}): 16.0

Total nominal obligation for Node C (i.e. p_{bar_3}): 4.0

TOTAL PAYMENT MADE PER NODE - round 3

i.e. $\min[\text{nominal obligations, cashflow (payments in + exogenous cash flow)}]$ for each node...

Node A

- Total payments in for Node A

Relative Payment in to Node A from Node B is 0.4375

Total dollar payment (i.e. liabilities) by Node B (i.e. p_2) is 3.0

Relative Payment in to Node A from Node C is 0.75

Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0

Total payments in to Node A is 4.3125 in round 3.

- Liabilities for Node A

Liability of Node A to Node B (i.e. P_{01}) is 2.0

Liability of Node A to Node C (i.e. P_{02}) is 9.0

Total nominal liabilities for Node A (i.e. p_{bar_1}) is 11.0

Payment out is $\min[\text{payment out}, \text{total cash flow}]$ i.e. $\min[11.0, 7.3125]$
 Relative Payment in to Node A from Node B is 0.4375
 Total dollar payment (i.e. liabilities) by Node B (i.e. p_2) is 3.0
 Relative Payment in to Node A from Node C is 0.75
 Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0
 Total payments in to Node A is 4.3125 in round 3.
 Relative Payment in to Node A from Node B is 0.4375
 Total dollar payment (i.e. liabilities) by Node B (i.e. p_2) is 3.0
 Relative Payment in to Node A from Node C is 0.75
 Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0
 Total payments in to Node A is 4.3125 in round 3.
 Relative Payment in to Node A from Node B is 0.4375
 Total dollar payment (i.e. liabilities) by Node B (i.e. p_2) is 3.0
 Relative Payment in to Node A from Node C is 0.75
 Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0
 Total payments in to Node A is 4.3125 in round 3.
 Round 3 and Node A has defaulted due to nominal obligations 11.0 being greater than cash flow 7.3125. Default loss for Node A is 0.0

- Total Dollar Payment Vector for round 3 and Node A
 Total Dollar Payment Vector for round 3 and Node A updated with value 7.3125

Node B

- Total payments in for Node B
 Relative Payment in to Node B from Node A is 0.18181818181818182
 Total dollar payment (i.e. liabilities) by Node A (i.e. p_1) is 7.3125
 Relative Payment in to Node B from Node C is 0.25
 Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0
 Total payments in to Node B is 2.3295454545454546 in round 3.

- Liabilities for Node B
 Liability of Node B to Node A (i.e. P_{10}) is 7.0
 Liability of Node B to Node C (i.e. P_{12}) is 9.0
 Total nominal liabilities for Node B (i.e. p_{bar_2}) is 16.0

Payment out is $\min[\text{payment out}, \text{total cash flow}]$ i.e. $\min[16.0, 2.3295454545454546]$
 Relative Payment in to Node B from Node A is 0.18181818181818182
 Total dollar payment (i.e. liabilities) by Node A (i.e. p_1) is 7.3125
 Relative Payment in to Node B from Node C is 0.25
 Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0
 Total payments in to Node B is 2.3295454545454546 in round 3.
 Relative Payment in to Node B from Node A is 0.18181818181818182
 Total dollar payment (i.e. liabilities) by Node A (i.e. p_1) is 7.3125
 Relative Payment in to Node B from Node C is 0.25
 Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0

Total payments in to Node B is 2.3295454545454546 in round 3.
 Relative Payment in to Node B from Node A is 0.181818181818182
 Total dollar payment (i.e. liabilities) by Node A (i.e. p_1) is 7.3125
 Relative Payment in to Node B from Node C is 0.25
 Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0
 Total payments in to Node B is 2.3295454545454546 in round 3.
 Round 3 and Node B has defaulted due to nominal obligations 16.0 being greater
 than cash flow 2.3295454545454546. Default loss for Node B is 0.0

- Total Dollar Payment Vector for round 3 and Node B
 Total Dollar Payment Vector for round 3 and Node B updated with value
 2.3295454545454546

Node C

- Total payments in for Node C
 Relative Payment in to Node C from Node A is 0.8181818181818182
 Total dollar payment (i.e. liabilities) by Node A (i.e. p_1) is 7.3125
 Relative Payment in to Node C from Node B is 0.5625
 Total dollar payment (i.e. liabilities) by Node B (i.e. p_2) is 3.0
 Total payments in to Node C is 7.670454545454546 in round 3.

- Liabilities for Node C
 Liability of Node C to Node A (i.e. P_20) is 3.0
 Liability of Node C to Node B (i.e. P_21) is 1.0
 Total nominal liabilities for Node C (i.e. p_bar_3) is 4.0

Payment out is min[payment out, total cash flow] i.e. min[4.0,
 11.670454545454547]

- Total Dollar Payment Vector for round 3 and Node C
 Total Dollar Payment Vector for round 3 and Node C updated with value 4.0

TOTAL PAYMENT VECTOR - round 3

Total payment by Node A (i.e. p_1): 7.3125
 Total payment by Node B (i.e. p_2): 2.3295454545454546
 Total payment by Node C (i.e. p_3): 4.0
 [7.3125, 2.3295454545454546, 4.0]

UPDATE EQUITY (i.e. BOOK VALUE) FOR EACH NODE - round 3

Node A

Total operating cash flow (exogenous assets) 3.0.

Relative Payment in to Node A from Node B is 0.4375
 Total dollar payment (i.e. liabilities) by Node B (i.e. p_2) is 3.0
 Relative Payment in to Node A from Node C is 0.75
 Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0
 Total payments in to Node A is 4.3125 in round 3.
 Total dollar payment (i.e. liabilities) by Node A (i.e. p_1) is 7.3125
 Equity Vector for round 3 and Node A
 Equity Vector for round 3 and Node A updated with value 0.0 i.e. total cash flow
 7.3125 minus total payments out (liabilities) 7.3125.

Node B

Total operating cash flow (exogenous assets) 0.0.
 Relative Payment in to Node B from Node A is 0.181818181818182
 Total dollar payment (i.e. liabilities) by Node A (i.e. p_1) is 7.3125
 Relative Payment in to Node B from Node C is 0.25
 Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0
 Total payments in to Node B is 2.3295454545454546 in round 3.
 Total dollar payment (i.e. liabilities) by Node B (i.e. p_2) is
 2.3295454545454546
 Equity Vector for round 3 and Node B
 Equity Vector for round 3 and Node B updated with value 0.0 i.e. total cash flow
 2.3295454545454546 minus total payments out (liabilities) 2.3295454545454546.

Node C

Total operating cash flow (exogenous assets) 4.0.
 Relative Payment in to Node C from Node A is 0.8181818181818182
 Total dollar payment (i.e. liabilities) by Node A (i.e. p_1) is 7.3125
 Relative Payment in to Node C from Node B is 0.5625
 Total dollar payment (i.e. liabilities) by Node B (i.e. p_2) is 3.0
 Total payments in to Node C is 7.670454545454546 in round 3.
 Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0
 Equity Vector for round 3 and Node C
 Equity Vector for round 3 and Node C updated with value 7.670454545454547 i.e.
 total cash flow 11.670454545454547 minus total payments out (liabilities) 4.0.

 EQUITY FOR EACH NODE - round 3

Equity for Node A: 0.0
 Equity for Node B: 0.0
 Equity for Node C: 7.670454545454547
 [0.0, 0.0, 7.670454545454547]

ROUND 3 DEFAULTERS

Node A has defaulted in round 3
{'A': True, 'B': True, 'C': False}
The payment vectors for the previous round and current round (i.e. round 3) are not identical, algorithm will proceed for another round.

END OF ROUND 3

START OF ROUND 4

TOTAL OBLIGATION VECTOR - round 4

i.e. total nominal obligations for each node i.e. p_bar_i...
Total nominal obligation for Node A (i.e. p_bar_1): 11.0
Total nominal obligation for Node B (i.e. p_bar_2): 16.0
Total nominal obligation for Node C (i.e. p_bar_3): 4.0

TOTAL PAYMENT MADE PER NODE - round 4

i.e. min[nominal obligations, cashflow (payments in + exogenous cash flow)] for each node...

Node A

- Total payments in for Node A
Relative Payment in to Node A from Node B is 0.4375
Total dollar payment (i.e. liabilities) by Node B (i.e. p_2) is 2.3295454545454546
Relative Payment in to Node A from Node C is 0.75
Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0
Total payments in to Node A is 4.019176136363637 in round 4.

- Liabilities for Node A
Liability of Node A to Node B (i.e. P_01) is 2.0
Liability of Node A to Node C (i.e. P_02) is 9.0
Total nominal liabilities for Node A (i.e. p_bar_1) is 11.0

Payment out is min[payment out, total cash flow] i.e. min[11.0, 7.019176136363637]
Relative Payment in to Node A from Node B is 0.4375

Total dollar payment (i.e. liabilities) by Node B (i.e. p_2) is
2.3295454545454546
Relative Payment in to Node A from Node C is 0.75
Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0
Total payments in to Node A is 4.019176136363637 in round 4.
Relative Payment in to Node A from Node B is 0.4375
Total dollar payment (i.e. liabilities) by Node B (i.e. p_2) is
2.3295454545454546
Relative Payment in to Node A from Node C is 0.75
Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0
Total payments in to Node A is 4.019176136363637 in round 4.
Relative Payment in to Node A from Node B is 0.4375
Total dollar payment (i.e. liabilities) by Node B (i.e. p_2) is
2.3295454545454546
Relative Payment in to Node A from Node C is 0.75
Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0
Total payments in to Node A is 4.019176136363637 in round 4.
Round 4 and Node A has defaulted due to nominal obligations 11.0 being greater
than cash flow 7.019176136363637. Default loss for Node A is 0.0

- Total Dollar Payment Vector for round 4 and Node A
Total Dollar Payment Vector for round 4 and Node A updated with value
7.019176136363637

Node B

- Total payments in for Node B
Relative Payment in to Node B from Node A is 0.181818181818182
Total dollar payment (i.e. liabilities) by Node A (i.e. p_1) is 7.3125
Relative Payment in to Node B from Node C is 0.25
Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0
Total payments in to Node B is 2.3295454545454546 in round 4.

- Liabilities for Node B
Liability of Node B to Node A (i.e. P_10) is 7.0
Liability of Node B to Node C (i.e. P_12) is 9.0
Total nominal liabilities for Node B (i.e. p_bar_2) is 16.0

Payment out is min[payment out, total cash flow] i.e. min[16.0,
2.3295454545454546]
Relative Payment in to Node B from Node A is 0.181818181818182
Total dollar payment (i.e. liabilities) by Node A (i.e. p_1) is 7.3125
Relative Payment in to Node B from Node C is 0.25
Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0
Total payments in to Node B is 2.3295454545454546 in round 4.
Relative Payment in to Node B from Node A is 0.181818181818182
Total dollar payment (i.e. liabilities) by Node A (i.e. p_1) is 7.3125
Relative Payment in to Node B from Node C is 0.25

Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0
Total payments in to Node B is 2.3295454545454546 in round 4.
Relative Payment in to Node B from Node A is 0.181818181818182
Total dollar payment (i.e. liabilities) by Node A (i.e. p_1) is 7.3125
Relative Payment in to Node B from Node C is 0.25
Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0
Total payments in to Node B is 2.3295454545454546 in round 4.
Round 4 and Node B has defaulted due to nominal obligations 16.0 being greater
than cash flow 2.3295454545454546. Default loss for Node B is 0.0

- Total Dollar Payment Vector for round 4 and Node B
Total Dollar Payment Vector for round 4 and Node B updated with value
2.3295454545454546

Node C

- Total payments in for Node C
Relative Payment in to Node C from Node A is 0.8181818181818182
Total dollar payment (i.e. liabilities) by Node A (i.e. p_1) is 7.3125
Relative Payment in to Node C from Node B is 0.5625
Total dollar payment (i.e. liabilities) by Node B (i.e. p_2) is
2.3295454545454546
Total payments in to Node C is 7.293323863636364 in round 4.

- Liabilities for Node C
Liability of Node C to Node A (i.e. P_20) is 3.0
Liability of Node C to Node B (i.e. P_21) is 1.0
Total nominal liabilities for Node C (i.e. p_bar_3) is 4.0

Payment out is min[payment out, total cash flow] i.e. min[4.0,
11.293323863636363]

- Total Dollar Payment Vector for round 4 and Node C
Total Dollar Payment Vector for round 4 and Node C updated with value 4.0

TOTAL PAYMENT VECTOR - round 4

Total payment by Node A (i.e. p_1): 7.019176136363637
Total payment by Node B (i.e. p_2): 2.3295454545454546
Total payment by Node C (i.e. p_3): 4.0
[7.019176136363637, 2.3295454545454546, 4.0]

UPDATE EQUITY (i.e. BOOK VALUE) FOR EACH NODE - round 4

Node A

Total operating cash flow (exogenous assets) 3.0.
Relative Payment in to Node A from Node B is 0.4375
Total dollar payment (i.e. liabilities) by Node B (i.e. p_2) is
2.3295454545454546
Relative Payment in to Node A from Node C is 0.75
Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0
Total payments in to Node A is 4.019176136363637 in round 4.
Total dollar payment (i.e. liabilities) by Node A (i.e. p_1) is
7.019176136363637
Equity Vector for round 4 and Node A
Equity Vector for round 4 and Node A updated with value 0.0 i.e. total cash flow
7.019176136363637 minus total payments out (liabilities) 7.019176136363637.

Node B

Total operating cash flow (exogenous assets) 0.0.
Relative Payment in to Node B from Node A is 0.18181818181818182
Total dollar payment (i.e. liabilities) by Node A (i.e. p_1) is 7.3125
Relative Payment in to Node B from Node C is 0.25
Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0
Total payments in to Node B is 2.3295454545454546 in round 4.
Total dollar payment (i.e. liabilities) by Node B (i.e. p_2) is
2.3295454545454546
Equity Vector for round 4 and Node B
Equity Vector for round 4 and Node B updated with value 0.0 i.e. total cash flow
2.3295454545454546 minus total payments out (liabilities) 2.3295454545454546.

Node C

Total operating cash flow (exogenous assets) 4.0.
Relative Payment in to Node C from Node A is 0.8181818181818182
Total dollar payment (i.e. liabilities) by Node A (i.e. p_1) is 7.3125
Relative Payment in to Node C from Node B is 0.5625
Total dollar payment (i.e. liabilities) by Node B (i.e. p_2) is
2.3295454545454546
Total payments in to Node C is 7.293323863636364 in round 4.
Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0
Equity Vector for round 4 and Node C
Equity Vector for round 4 and Node C updated with value 7.293323863636363 i.e.
total cash flow 11.293323863636363 minus total payments out (liabilities) 4.0.

EQUITY FOR EACH NODE - round 4

Equity for Node A: 0.0
Equity for Node B: 0.0
Equity for Node C: 7.293323863636363

[0.0, 0.0, 7.293323863636363]

ROUND 4 DEFAULTERS

Node A has defaulted in round 4

{'A': True, 'B': True, 'C': False}

The payment vectors for the previous round and current round (i.e. round 4) are not identical, algorithm will proceed for another round.

END OF ROUND 4

START OF ROUND 5

TOTAL OBLIGATION VECTOR - round 5

i.e. total nominal obligations for each node i.e. p_{bar_i}

Total nominal obligation for Node A (i.e. p_{bar_1}): 11.0

Total nominal obligation for Node B (i.e. p_{bar_2}): 16.0

Total nominal obligation for Node C (i.e. p_{bar_3}): 4.0

TOTAL PAYMENT MADE PER NODE - round 5

i.e. $\min[\text{nominal obligations, cashflow (payments in + exogenous cash flow)}]$ for each node...

Node A

- Total payments in for Node A

Relative Payment in to Node A from Node B is 0.4375

Total dollar payment (i.e. liabilities) by Node B (i.e. p_2) is 2.3295454545454546

Relative Payment in to Node A from Node C is 0.75

Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0

Total payments in to Node A is 4.019176136363637 in round 5.

- Liabilities for Node A

Liability of Node A to Node B (i.e. P_{01}) is 2.0

Liability of Node A to Node C (i.e. P_{02}) is 9.0

Total nominal liabilities for Node A (i.e. $p_{\bar{1}}$) is 11.0

Payment out is $\min[\text{payment out}, \text{total cash flow}]$ i.e. $\min[11.0, 7.019176136363637]$

Relative Payment in to Node A from Node B is 0.4375

Total dollar payment (i.e. liabilities) by Node B (i.e. p_2) is 2.3295454545454546

Relative Payment in to Node A from Node C is 0.75

Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0

Total payments in to Node A is 4.019176136363637 in round 5.

Relative Payment in to Node A from Node B is 0.4375

Total dollar payment (i.e. liabilities) by Node B (i.e. p_2) is 2.3295454545454546

Relative Payment in to Node A from Node C is 0.75

Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0

Total payments in to Node A is 4.019176136363637 in round 5.

Relative Payment in to Node A from Node B is 0.4375

Total dollar payment (i.e. liabilities) by Node B (i.e. p_2) is 2.3295454545454546

Relative Payment in to Node A from Node C is 0.75

Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0

Total payments in to Node A is 4.019176136363637 in round 5.

Round 5 and Node A has defaulted due to nominal obligations 11.0 being greater than cash flow 7.019176136363637. Default loss for Node A is 0.0

- Total Dollar Payment Vector for round 5 and Node A

Total Dollar Payment Vector for round 5 and Node A updated with value 7.019176136363637

Node B

- Total payments in for Node B

Relative Payment in to Node B from Node A is 0.18181818181818182

Total dollar payment (i.e. liabilities) by Node A (i.e. p_1) is 7.019176136363637

Relative Payment in to Node B from Node C is 0.25

Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0

Total payments in to Node B is 2.276213842975207 in round 5.

- Liabilities for Node B

Liability of Node B to Node A (i.e. P_{10}) is 7.0

Liability of Node B to Node C (i.e. P_{12}) is 9.0

Total nominal liabilities for Node B (i.e. $p_{\bar{2}}$) is 16.0

Payment out is $\min[\text{payment out}, \text{total cash flow}]$ i.e. $\min[16.0, 2.276213842975207]$

Relative Payment in to Node B from Node A is 0.18181818181818182

Total dollar payment (i.e. liabilities) by Node A (i.e. p_1) is

7.019176136363637
 Relative Payment in to Node B from Node C is 0.25
 Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0
 Total payments in to Node B is 2.276213842975207 in round 5.
 Relative Payment in to Node B from Node A is 0.181818181818182
 Total dollar payment (i.e. liabilities) by Node A (i.e. p_1) is
 7.019176136363637
 Relative Payment in to Node B from Node C is 0.25
 Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0
 Total payments in to Node B is 2.276213842975207 in round 5.
 Relative Payment in to Node B from Node A is 0.181818181818182
 Total dollar payment (i.e. liabilities) by Node A (i.e. p_1) is
 7.019176136363637
 Relative Payment in to Node B from Node C is 0.25
 Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0
 Total payments in to Node B is 2.276213842975207 in round 5.
 Round 5 and Node B has defaulted due to nominal obligations 16.0 being greater
 than cash flow 2.276213842975207. Default loss for Node B is 0.0

- Total Dollar Payment Vector for round 5 and Node B
 Total Dollar Payment Vector for round 5 and Node B updated with value
 2.276213842975207

Node C

- Total payments in for Node C
 Relative Payment in to Node C from Node A is 0.8181818181818182
 Total dollar payment (i.e. liabilities) by Node A (i.e. p_1) is
 7.019176136363637
 Relative Payment in to Node C from Node B is 0.5625
 Total dollar payment (i.e. liabilities) by Node B (i.e. p_2) is
 2.3295454545454546
 Total payments in to Node C is 7.053331611570249 in round 5.

- Liabilities for Node C
 Liability of Node C to Node A (i.e. P_20) is 3.0
 Liability of Node C to Node B (i.e. P_21) is 1.0
 Total nominal liabilities for Node C (i.e. p_bar_3) is 4.0

Payment out is min[payment out, total cash flow] i.e. min[4.0,
 11.053331611570249]

- Total Dollar Payment Vector for round 5 and Node C
 Total Dollar Payment Vector for round 5 and Node C updated with value 4.0

 TOTAL PAYMENT VECTOR - round 5

Total payment by Node A (i.e. p_1): 7.019176136363637
Total payment by Node B (i.e. p_2): 2.276213842975207
Total payment by Node C (i.e. p_3): 4.0
[7.019176136363637, 2.276213842975207, 4.0]

UPDATE EQUITY (i.e. BOOK VALUE) FOR EACH NODE - round 5

Node A

Total operating cash flow (exogenous assets) 3.0.
Relative Payment in to Node A from Node B is 0.4375
Total dollar payment (i.e. liabilities) by Node B (i.e. p_2) is
2.3295454545454546
Relative Payment in to Node A from Node C is 0.75
Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0
Total payments in to Node A is 4.019176136363637 in round 5.
Total dollar payment (i.e. liabilities) by Node A (i.e. p_1) is
7.019176136363637
Equity Vector for round 5 and Node A
Equity Vector for round 5 and Node A updated with value 0.0 i.e. total cash flow
7.019176136363637 minus total payments out (liabilities) 7.019176136363637.

Node B

Total operating cash flow (exogenous assets) 0.0.
Relative Payment in to Node B from Node A is 0.181818181818182
Total dollar payment (i.e. liabilities) by Node A (i.e. p_1) is
7.019176136363637
Relative Payment in to Node B from Node C is 0.25
Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0
Total payments in to Node B is 2.276213842975207 in round 5.
Total dollar payment (i.e. liabilities) by Node B (i.e. p_2) is
2.276213842975207
Equity Vector for round 5 and Node B
Equity Vector for round 5 and Node B updated with value 0.0 i.e. total cash flow
2.276213842975207 minus total payments out (liabilities) 2.276213842975207.

Node C

Total operating cash flow (exogenous assets) 4.0.
Relative Payment in to Node C from Node A is 0.8181818181818182
Total dollar payment (i.e. liabilities) by Node A (i.e. p_1) is
7.019176136363637
Relative Payment in to Node C from Node B is 0.5625
Total dollar payment (i.e. liabilities) by Node B (i.e. p_2) is
2.3295454545454546
Total payments in to Node C is 7.053331611570249 in round 5.
Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0

Equity Vector for round 5 and Node C
Equity Vector for round 5 and Node C updated with value 7.053331611570249 i.e.
total cash flow 11.053331611570249 minus total payments out (liabilities) 4.0.

EQUITY FOR EACH NODE - round 5

Equity for Node A: 0.0
Equity for Node B: 0.0
Equity for Node C: 7.053331611570249
[0.0, 0.0, 7.053331611570249]

ROUND 5 DEFAULTERS

Node A has defaulted in round 5
{'A': True, 'B': True, 'C': False}
The payment vectors for the previous round and current round (i.e. round 5) are
not identical, algorithm will proceed for another round.

END OF ROUND 5

START OF ROUND 6

TOTAL OBLIGATION VECTOR - round 6

i.e. total nominal obligations for each node i.e. p_{bar_i}
Total nominal obligation for Node A (i.e. p_{bar_1}): 11.0
Total nominal obligation for Node B (i.e. p_{bar_2}): 16.0
Total nominal obligation for Node C (i.e. p_{bar_3}): 4.0

TOTAL PAYMENT MADE PER NODE - round 6

i.e. $\min[\text{nominal obligations, cashflow (payments in + exogenous cash flow)}]$ for
each node...

Node A

- Total payments in for Node A
Relative Payment in to Node A from Node B is 0.4375
Total dollar payment (i.e. liabilities) by Node B (i.e. p_2) is
2.276213842975207
Relative Payment in to Node A from Node C is 0.75
Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0
Total payments in to Node A is 3.995843556301653 in round 6.

- Liabilities for Node A
Liability of Node A to Node B (i.e. P_01) is 2.0
Liability of Node A to Node C (i.e. P_02) is 9.0
Total nominal liabilities for Node A (i.e. p_bar_1) is 11.0

Payment out is min[payment out, total cash flow] i.e. min[11.0,
6.9958435563016526]
Relative Payment in to Node A from Node B is 0.4375
Total dollar payment (i.e. liabilities) by Node B (i.e. p_2) is
2.276213842975207
Relative Payment in to Node A from Node C is 0.75
Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0
Total payments in to Node A is 3.995843556301653 in round 6.
Relative Payment in to Node A from Node B is 0.4375
Total dollar payment (i.e. liabilities) by Node B (i.e. p_2) is
2.276213842975207
Relative Payment in to Node A from Node C is 0.75
Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0
Total payments in to Node A is 3.995843556301653 in round 6.
Relative Payment in to Node A from Node B is 0.4375
Total dollar payment (i.e. liabilities) by Node B (i.e. p_2) is
2.276213842975207
Relative Payment in to Node A from Node C is 0.75
Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0
Total payments in to Node A is 3.995843556301653 in round 6.
Round 6 and Node A has defaulted due to nominal obligations 11.0 being greater
than cash flow 6.9958435563016526. Default loss for Node A is 0.0

- Total Dollar Payment Vector for round 6 and Node A
Total Dollar Payment Vector for round 6 and Node A updated with value
6.9958435563016526

Node B

- Total payments in for Node B
Relative Payment in to Node B from Node A is 0.181818181818182
Total dollar payment (i.e. liabilities) by Node A (i.e. p_1) is
7.019176136363637
Relative Payment in to Node B from Node C is 0.25

Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0
Total payments in to Node B is 2.276213842975207 in round 6.

- Liabilities for Node B

Liability of Node B to Node A (i.e. P_{10}) is 7.0

Liability of Node B to Node C (i.e. P_{12}) is 9.0

Total nominal liabilities for Node B (i.e. p_{bar_2}) is 16.0

Payment out is $\min[\text{payment out, total cash flow}]$ i.e. $\min[16.0, 2.276213842975207]$

Relative Payment in to Node B from Node A is 0.18181818181818182

Total dollar payment (i.e. liabilities) by Node A (i.e. p_1) is 7.019176136363637

Relative Payment in to Node B from Node C is 0.25

Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0

Total payments in to Node B is 2.276213842975207 in round 6.

Relative Payment in to Node B from Node A is 0.18181818181818182

Total dollar payment (i.e. liabilities) by Node A (i.e. p_1) is 7.019176136363637

Relative Payment in to Node B from Node C is 0.25

Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0

Total payments in to Node B is 2.276213842975207 in round 6.

Relative Payment in to Node B from Node A is 0.18181818181818182

Total dollar payment (i.e. liabilities) by Node A (i.e. p_1) is 7.019176136363637

Relative Payment in to Node B from Node C is 0.25

Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0

Total payments in to Node B is 2.276213842975207 in round 6.

Round 6 and Node B has defaulted due to nominal obligations 16.0 being greater than cash flow 2.276213842975207. Default loss for Node B is 0.0

- Total Dollar Payment Vector for round 6 and Node B

Total Dollar Payment Vector for round 6 and Node B updated with value 2.276213842975207

Node C

- Total payments in for Node C

Relative Payment in to Node C from Node A is 0.8181818181818182

Total dollar payment (i.e. liabilities) by Node A (i.e. p_1) is 7.019176136363637

Relative Payment in to Node C from Node B is 0.5625

Total dollar payment (i.e. liabilities) by Node B (i.e. p_2) is 2.276213842975207

Total payments in to Node C is 7.023332580061984 in round 6.

- Liabilities for Node C

Liability of Node C to Node A (i.e. P_{20}) is 3.0

Liability of Node C to Node B (i.e. P_{21}) is 1.0
Total nominal liabilities for Node C (i.e. $p_{\bar{3}}$) is 4.0

Payment out is $\min[\text{payment out}, \text{total cash flow}]$ i.e. $\min[4.0, 11.023332580061984]$

- Total Dollar Payment Vector for round 6 and Node C
Total Dollar Payment Vector for round 6 and Node C updated with value 4.0

TOTAL PAYMENT VECTOR - round 6

Total payment by Node A (i.e. p_1): 6.9958435563016526
Total payment by Node B (i.e. p_2): 2.276213842975207
Total payment by Node C (i.e. p_3): 4.0
[6.9958435563016526, 2.276213842975207, 4.0]

UPDATE EQUITY (i.e. BOOK VALUE) FOR EACH NODE - round 6

Node A

Total operating cash flow (exogenous assets) 3.0.
Relative Payment in to Node A from Node B is 0.4375
Total dollar payment (i.e. liabilities) by Node B (i.e. p_2) is 2.276213842975207
Relative Payment in to Node A from Node C is 0.75
Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0
Total payments in to Node A is 3.995843556301653 in round 6.
Total dollar payment (i.e. liabilities) by Node A (i.e. p_1) is 6.9958435563016526
Equity Vector for round 6 and Node A
Equity Vector for round 6 and Node A updated with value 0.0 i.e. total cash flow 6.9958435563016526 minus total payments out (liabilities) 6.9958435563016526.

Node B

Total operating cash flow (exogenous assets) 0.0.
Relative Payment in to Node B from Node A is 0.181818181818182
Total dollar payment (i.e. liabilities) by Node A (i.e. p_1) is 7.019176136363637
Relative Payment in to Node B from Node C is 0.25
Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0
Total payments in to Node B is 2.276213842975207 in round 6.
Total dollar payment (i.e. liabilities) by Node B (i.e. p_2) is 2.276213842975207
Equity Vector for round 6 and Node B
Equity Vector for round 6 and Node B updated with value 0.0 i.e. total cash flow

2.276213842975207 minus total payments out (liabilities) 2.276213842975207.

Node C

Total operating cash flow (exogenous assets) 4.0.

Relative Payment in to Node C from Node A is 0.8181818181818182

Total dollar payment (i.e. liabilities) by Node A (i.e. p_1) is
7.019176136363637

Relative Payment in to Node C from Node B is 0.5625

Total dollar payment (i.e. liabilities) by Node B (i.e. p_2) is
2.276213842975207

Total payments in to Node C is 7.023332580061984 in round 6.

Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0

Equity Vector for round 6 and Node C

Equity Vector for round 6 and Node C updated with value 7.023332580061984 i.e.
total cash flow 11.023332580061984 minus total payments out (liabilities) 4.0.

EQUITY FOR EACH NODE - round 6

Equity for Node A: 0.0

Equity for Node B: 0.0

Equity for Node C: 7.023332580061984

[0.0, 0.0, 7.023332580061984]

ROUND 6 DEFAULTERS

Node A has defaulted in round 6

{'A': True, 'B': True, 'C': False}

The payment vectors for the previous round and current round (i.e. round 6) are
not identical, algorithm will proceed for another round.

END OF ROUND 6

START OF ROUND 7

TOTAL OBLIGATION VECTOR - round 7

i.e. total nominal obligations for each node i.e. \bar{p}_i

Total nominal obligation for Node A (i.e. $p_{\bar{1}}$): 11.0
Total nominal obligation for Node B (i.e. $p_{\bar{2}}$): 16.0
Total nominal obligation for Node C (i.e. $p_{\bar{3}}$): 4.0

TOTAL PAYMENT MADE PER NODE - round 7

i.e. $\min[\text{nominal obligations, cashflow (payments in + exogenous cash flow)}]$ for each node...

Node A

- Total payments in for Node A

Relative Payment in to Node A from Node B is 0.4375

Total dollar payment (i.e. liabilities) by Node B (i.e. p_2) is
2.276213842975207

Relative Payment in to Node A from Node C is 0.75

Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0

Total payments in to Node A is 3.995843556301653 in round 7.

- Liabilities for Node A

Liability of Node A to Node B (i.e. P_{01}) is 2.0

Liability of Node A to Node C (i.e. P_{02}) is 9.0

Total nominal liabilities for Node A (i.e. $p_{\bar{1}}$) is 11.0

Payment out is $\min[\text{payment out, total cash flow}]$ i.e. $\min[11.0, 6.9958435563016526]$

Relative Payment in to Node A from Node B is 0.4375

Total dollar payment (i.e. liabilities) by Node B (i.e. p_2) is
2.276213842975207

Relative Payment in to Node A from Node C is 0.75

Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0

Total payments in to Node A is 3.995843556301653 in round 7.

Relative Payment in to Node A from Node B is 0.4375

Total dollar payment (i.e. liabilities) by Node B (i.e. p_2) is
2.276213842975207

Relative Payment in to Node A from Node C is 0.75

Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0

Total payments in to Node A is 3.995843556301653 in round 7.

Relative Payment in to Node A from Node B is 0.4375

Total dollar payment (i.e. liabilities) by Node B (i.e. p_2) is
2.276213842975207

Relative Payment in to Node A from Node C is 0.75

Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0

Total payments in to Node A is 3.995843556301653 in round 7.

Round 7 and Node A has defaulted due to nominal obligations 11.0 being greater than cash flow 6.9958435563016526. Default loss for Node A is 0.0

- Total Dollar Payment Vector for round 7 and Node A
Total Dollar Payment Vector for round 7 and Node A updated with value
6.9958435563016526

Node B

- Total payments in for Node B
Relative Payment in to Node B from Node A is 0.181818181818182
Total dollar payment (i.e. liabilities) by Node A (i.e. p_1) is
6.9958435563016526
Relative Payment in to Node B from Node C is 0.25
Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0
Total payments in to Node B is 2.2719715556912097 in round 7.

- Liabilities for Node B
Liability of Node B to Node A (i.e. P_10) is 7.0
Liability of Node B to Node C (i.e. P_12) is 9.0
Total nominal liabilities for Node B (i.e. p_bar_2) is 16.0

Payment out is min[payment out, total cash flow] i.e. min[16.0,
2.2719715556912097]
Relative Payment in to Node B from Node A is 0.181818181818182
Total dollar payment (i.e. liabilities) by Node A (i.e. p_1) is
6.9958435563016526
Relative Payment in to Node B from Node C is 0.25
Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0
Total payments in to Node B is 2.2719715556912097 in round 7.
Relative Payment in to Node B from Node A is 0.181818181818182
Total dollar payment (i.e. liabilities) by Node A (i.e. p_1) is
6.9958435563016526
Relative Payment in to Node B from Node C is 0.25
Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0
Total payments in to Node B is 2.2719715556912097 in round 7.
Relative Payment in to Node B from Node A is 0.181818181818182
Total dollar payment (i.e. liabilities) by Node A (i.e. p_1) is
6.9958435563016526
Relative Payment in to Node B from Node C is 0.25
Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0
Total payments in to Node B is 2.2719715556912097 in round 7.
Round 7 and Node B has defaulted due to nominal obligations 16.0 being greater
than cash flow 2.2719715556912097. Default loss for Node B is 0.0

- Total Dollar Payment Vector for round 7 and Node B
Total Dollar Payment Vector for round 7 and Node B updated with value
2.2719715556912097

Node C

- Total payments in for Node C
 Relative Payment in to Node C from Node A is 0.8181818181818182
 Total dollar payment (i.e. liabilities) by Node A (i.e. p_1) is
 6.9958435563016526
 Relative Payment in to Node C from Node B is 0.5625
 Total dollar payment (i.e. liabilities) by Node B (i.e. p_2) is
 2.276213842975207
 Total payments in to Node C is 7.004242287283997 in round 7.

- Liabilities for Node C
 Liability of Node C to Node A (i.e. P_20) is 3.0
 Liability of Node C to Node B (i.e. P_21) is 1.0
 Total nominal liabilities for Node C (i.e. p_bar_3) is 4.0

Payment out is min[payment out, total cash flow] i.e. min[4.0,
 11.004242287283997]

- Total Dollar Payment Vector for round 7 and Node C
 Total Dollar Payment Vector for round 7 and Node C updated with value 4.0

TOTAL PAYMENT VECTOR - round 7

Total payment by Node A (i.e. p_1): 6.9958435563016526
 Total payment by Node B (i.e. p_2): 2.2719715556912097
 Total payment by Node C (i.e. p_3): 4.0
 [6.9958435563016526, 2.2719715556912097, 4.0]

UPDATE EQUITY (i.e. BOOK VALUE) FOR EACH NODE - round 7

Node A

Total operating cash flow (exogenous assets) 3.0.
 Relative Payment in to Node A from Node B is 0.4375
 Total dollar payment (i.e. liabilities) by Node B (i.e. p_2) is
 2.276213842975207
 Relative Payment in to Node A from Node C is 0.75
 Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0
 Total payments in to Node A is 3.995843556301653 in round 7.
 Total dollar payment (i.e. liabilities) by Node A (i.e. p_1) is
 6.9958435563016526
 Equity Vector for round 7 and Node A
 Equity Vector for round 7 and Node A updated with value 0.0 i.e. total cash flow
 6.9958435563016526 minus total payments out (liabilities) 6.9958435563016526.

Node B

Total operating cash flow (exogenous assets) 0.0.

Relative Payment in to Node B from Node A is 0.181818181818182

Total dollar payment (i.e. liabilities) by Node A (i.e. p_1) is
6.9958435563016526

Relative Payment in to Node B from Node C is 0.25

Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0

Total payments in to Node B is 2.2719715556912097 in round 7.

Total dollar payment (i.e. liabilities) by Node B (i.e. p_2) is
2.2719715556912097

Equity Vector for round 7 and Node B

Equity Vector for round 7 and Node B updated with value 0.0 i.e. total cash flow
2.2719715556912097 minus total payments out (liabilities) 2.2719715556912097.

Node C

Total operating cash flow (exogenous assets) 4.0.

Relative Payment in to Node C from Node A is 0.8181818181818182

Total dollar payment (i.e. liabilities) by Node A (i.e. p_1) is
6.9958435563016526

Relative Payment in to Node C from Node B is 0.5625

Total dollar payment (i.e. liabilities) by Node B (i.e. p_2) is
2.276213842975207

Total payments in to Node C is 7.004242287283997 in round 7.

Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0

Equity Vector for round 7 and Node C

Equity Vector for round 7 and Node C updated with value 7.004242287283997 i.e.
total cash flow 11.004242287283997 minus total payments out (liabilities) 4.0.

EQUITY FOR EACH NODE - round 7

Equity for Node A: 0.0

Equity for Node B: 0.0

Equity for Node C: 7.004242287283997

[0.0, 0.0, 7.004242287283997]

ROUND 7 DEFAULTERS

Node A has defaulted in round 7

{'A': True, 'B': True, 'C': False}

The payment vectors for the previous round and current round (i.e. round 7) are
not identical, algorithm will proceed for another round.

END OF ROUND 7

START OF ROUND 8

TOTAL OBLIGATION VECTOR - round 8

i.e. total nominal obligations for each node i.e. $p_{\bar{i}}$
Total nominal obligation for Node A (i.e. $p_{\bar{1}}$): 11.0
Total nominal obligation for Node B (i.e. $p_{\bar{2}}$): 16.0
Total nominal obligation for Node C (i.e. $p_{\bar{3}}$): 4.0

TOTAL PAYMENT MADE PER NODE - round 8

i.e. $\min[\text{nominal obligations, cashflow (payments in + exogenous cash flow)}]$ for each node...

Node A

- Total payments in for Node A
Relative Payment in to Node A from Node B is 0.4375
Total dollar payment (i.e. liabilities) by Node B (i.e. p_2) is 2.2719715556912097
Relative Payment in to Node A from Node C is 0.75
Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0
Total payments in to Node A is 3.993987555614904 in round 8.

- Liabilities for Node A
Liability of Node A to Node B (i.e. P_{01}) is 2.0
Liability of Node A to Node C (i.e. P_{02}) is 9.0
Total nominal liabilities for Node A (i.e. $p_{\bar{1}}$) is 11.0

Payment out is $\min[\text{payment out, total cash flow}]$ i.e. $\min[11.0, 6.993987555614904]$

Relative Payment in to Node A from Node B is 0.4375
Total dollar payment (i.e. liabilities) by Node B (i.e. p_2) is 2.2719715556912097
Relative Payment in to Node A from Node C is 0.75
Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0
Total payments in to Node A is 3.993987555614904 in round 8.
Relative Payment in to Node A from Node B is 0.4375
Total dollar payment (i.e. liabilities) by Node B (i.e. p_2) is

2.2719715556912097

Relative Payment in to Node A from Node C is 0.75

Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0

Total payments in to Node A is 3.993987555614904 in round 8.

Relative Payment in to Node A from Node B is 0.4375

Total dollar payment (i.e. liabilities) by Node B (i.e. p_2) is

2.2719715556912097

Relative Payment in to Node A from Node C is 0.75

Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0

Total payments in to Node A is 3.993987555614904 in round 8.

Round 8 and Node A has defaulted due to nominal obligations 11.0 being greater than cash flow 6.993987555614904. Default loss for Node A is 0.0

- Total Dollar Payment Vector for round 8 and Node A

Total Dollar Payment Vector for round 8 and Node A updated with value

6.993987555614904

Node B

- Total payments in for Node B

Relative Payment in to Node B from Node A is 0.181818181818182

Total dollar payment (i.e. liabilities) by Node A (i.e. p_1) is

6.9958435563016526

Relative Payment in to Node B from Node C is 0.25

Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0

Total payments in to Node B is 2.2719715556912097 in round 8.

- Liabilities for Node B

Liability of Node B to Node A (i.e. P_10) is 7.0

Liability of Node B to Node C (i.e. P_12) is 9.0

Total nominal liabilities for Node B (i.e. p_bar_2) is 16.0

Payment out is min[payment out, total cash flow] i.e. min[16.0, 2.2719715556912097]

Relative Payment in to Node B from Node A is 0.181818181818182

Total dollar payment (i.e. liabilities) by Node A (i.e. p_1) is

6.9958435563016526

Relative Payment in to Node B from Node C is 0.25

Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0

Total payments in to Node B is 2.2719715556912097 in round 8.

Relative Payment in to Node B from Node A is 0.181818181818182

Total dollar payment (i.e. liabilities) by Node A (i.e. p_1) is

6.9958435563016526

Relative Payment in to Node B from Node C is 0.25

Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0

Total payments in to Node B is 2.2719715556912097 in round 8.

Relative Payment in to Node B from Node A is 0.181818181818182

Total dollar payment (i.e. liabilities) by Node A (i.e. p_1) is

6.9958435563016526

Relative Payment in to Node B from Node C is 0.25

Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0

Total payments in to Node B is 2.2719715556912097 in round 8.

Round 8 and Node B has defaulted due to nominal obligations 16.0 being greater than cash flow 2.2719715556912097. Default loss for Node B is 0.0

- Total Dollar Payment Vector for round 8 and Node B

Total Dollar Payment Vector for round 8 and Node B updated with value 2.2719715556912097

Node C

- Total payments in for Node C

Relative Payment in to Node C from Node A is 0.8181818181818182

Total dollar payment (i.e. liabilities) by Node A (i.e. p_1) is 6.9958435563016526

Relative Payment in to Node C from Node B is 0.5625

Total dollar payment (i.e. liabilities) by Node B (i.e. p_2) is 2.2719715556912097

Total payments in to Node C is 7.0018560006867485 in round 8.

- Liabilities for Node C

Liability of Node C to Node A (i.e. P_20) is 3.0

Liability of Node C to Node B (i.e. P_21) is 1.0

Total nominal liabilities for Node C (i.e. p_bar_3) is 4.0

Payment out is min[payment out, total cash flow] i.e. min[4.0, 11.001856000686749]

- Total Dollar Payment Vector for round 8 and Node C

Total Dollar Payment Vector for round 8 and Node C updated with value 4.0

TOTAL PAYMENT VECTOR - round 8

Total payment by Node A (i.e. p_1): 6.993987555614904

Total payment by Node B (i.e. p_2): 2.2719715556912097

Total payment by Node C (i.e. p_3): 4.0

[6.993987555614904, 2.2719715556912097, 4.0]

UPDATE EQUITY (i.e. BOOK VALUE) FOR EACH NODE - round 8

Node A

Total operating cash flow (exogenous assets) 3.0.

Relative Payment in to Node A from Node B is 0.4375
 Total dollar payment (i.e. liabilities) by Node B (i.e. p_2) is
 2.2719715556912097
 Relative Payment in to Node A from Node C is 0.75
 Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0
 Total payments in to Node A is 3.993987555614904 in round 8.
 Total dollar payment (i.e. liabilities) by Node A (i.e. p_1) is
 6.993987555614904
 Equity Vector for round 8 and Node A
 Equity Vector for round 8 and Node A updated with value 0.0 i.e. total cash flow
 6.993987555614904 minus total payments out (liabilities) 6.993987555614904.

Node B

Total operating cash flow (exogenous assets) 0.0.
 Relative Payment in to Node B from Node A is 0.181818181818182
 Total dollar payment (i.e. liabilities) by Node A (i.e. p_1) is
 6.9958435563016526
 Relative Payment in to Node B from Node C is 0.25
 Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0
 Total payments in to Node B is 2.2719715556912097 in round 8.
 Total dollar payment (i.e. liabilities) by Node B (i.e. p_2) is
 2.2719715556912097
 Equity Vector for round 8 and Node B
 Equity Vector for round 8 and Node B updated with value 0.0 i.e. total cash flow
 2.2719715556912097 minus total payments out (liabilities) 2.2719715556912097.

Node C

Total operating cash flow (exogenous assets) 4.0.
 Relative Payment in to Node C from Node A is 0.8181818181818182
 Total dollar payment (i.e. liabilities) by Node A (i.e. p_1) is
 6.9958435563016526
 Relative Payment in to Node C from Node B is 0.5625
 Total dollar payment (i.e. liabilities) by Node B (i.e. p_2) is
 2.2719715556912097
 Total payments in to Node C is 7.0018560006867485 in round 8.
 Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0
 Equity Vector for round 8 and Node C
 Equity Vector for round 8 and Node C updated with value 7.0018560006867485 i.e.
 total cash flow 11.001856000686749 minus total payments out (liabilities) 4.0.

EQUITY FOR EACH NODE - round 8

Equity for Node A: 0.0
 Equity for Node B: 0.0
 Equity for Node C: 7.0018560006867485

[0.0, 0.0, 7.0018560006867485]

ROUND 8 DEFAULTERS

Node A has defaulted in round 8

{'A': True, 'B': True, 'C': False}

The payment vectors for the previous round and current round (i.e. round 8) are not identical, algorithm will proceed for another round.

END OF ROUND 8

START OF ROUND 9

TOTAL OBLIGATION VECTOR - round 9

i.e. total nominal obligations for each node i.e. p_{bar_i}

Total nominal obligation for Node A (i.e. p_{bar_1}): 11.0

Total nominal obligation for Node B (i.e. p_{bar_2}): 16.0

Total nominal obligation for Node C (i.e. p_{bar_3}): 4.0

TOTAL PAYMENT MADE PER NODE - round 9

i.e. $\min[\text{nominal obligations, cashflow (payments in + exogenous cash flow)}]$ for each node...

Node A

- Total payments in for Node A

Relative Payment in to Node A from Node B is 0.4375

Total dollar payment (i.e. liabilities) by Node B (i.e. p_2) is 2.2719715556912097

Relative Payment in to Node A from Node C is 0.75

Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0

Total payments in to Node A is 3.993987555614904 in round 9.

- Liabilities for Node A

Liability of Node A to Node B (i.e. P_{01}) is 2.0

Liability of Node A to Node C (i.e. P_{02}) is 9.0

Total nominal liabilities for Node A (i.e. $p_{\bar{1}}$) is 11.0

Payment out is $\min[\text{payment out}, \text{total cash flow}]$ i.e. $\min[11.0, 6.993987555614904]$

Relative Payment in to Node A from Node B is 0.4375

Total dollar payment (i.e. liabilities) by Node B (i.e. p_2) is 2.2719715556912097

Relative Payment in to Node A from Node C is 0.75

Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0

Total payments in to Node A is 3.993987555614904 in round 9.

Relative Payment in to Node A from Node B is 0.4375

Total dollar payment (i.e. liabilities) by Node B (i.e. p_2) is 2.2719715556912097

Relative Payment in to Node A from Node C is 0.75

Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0

Total payments in to Node A is 3.993987555614904 in round 9.

Relative Payment in to Node A from Node B is 0.4375

Total dollar payment (i.e. liabilities) by Node B (i.e. p_2) is 2.2719715556912097

Relative Payment in to Node A from Node C is 0.75

Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0

Total payments in to Node A is 3.993987555614904 in round 9.

Round 9 and Node A has defaulted due to nominal obligations 11.0 being greater than cash flow 6.993987555614904. Default loss for Node A is 0.0

- Total Dollar Payment Vector for round 9 and Node A
 Total Dollar Payment Vector for round 9 and Node A updated with value 6.993987555614904

Node B

- Total payments in for Node B

Relative Payment in to Node B from Node A is 0.18181818181818182

Total dollar payment (i.e. liabilities) by Node A (i.e. p_1) is 6.993987555614904

Relative Payment in to Node B from Node C is 0.25

Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0

Total payments in to Node B is 2.271634101020892 in round 9.

- Liabilities for Node B

Liability of Node B to Node A (i.e. P_{10}) is 7.0

Liability of Node B to Node C (i.e. P_{12}) is 9.0

Total nominal liabilities for Node B (i.e. $p_{\bar{2}}$) is 16.0

Payment out is $\min[\text{payment out}, \text{total cash flow}]$ i.e. $\min[16.0, 2.271634101020892]$

Relative Payment in to Node B from Node A is 0.18181818181818182

Total dollar payment (i.e. liabilities) by Node A (i.e. p_1) is

6.993987555614904

Relative Payment in to Node B from Node C is 0.25

Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0

Total payments in to Node B is 2.271634101020892 in round 9.

Relative Payment in to Node B from Node A is 0.181818181818182

Total dollar payment (i.e. liabilities) by Node A (i.e. p_1) is

6.993987555614904

Relative Payment in to Node B from Node C is 0.25

Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0

Total payments in to Node B is 2.271634101020892 in round 9.

Relative Payment in to Node B from Node A is 0.181818181818182

Total dollar payment (i.e. liabilities) by Node A (i.e. p_1) is

6.993987555614904

Relative Payment in to Node B from Node C is 0.25

Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0

Total payments in to Node B is 2.271634101020892 in round 9.

Round 9 and Node B has defaulted due to nominal obligations 16.0 being greater than cash flow 2.271634101020892. Default loss for Node B is 0.0

- Total Dollar Payment Vector for round 9 and Node B

Total Dollar Payment Vector for round 9 and Node B updated with value 2.271634101020892

Node C

- Total payments in for Node C

Relative Payment in to Node C from Node A is 0.8181818181818182

Total dollar payment (i.e. liabilities) by Node A (i.e. p_1) is

6.993987555614904

Relative Payment in to Node C from Node B is 0.5625

Total dollar payment (i.e. liabilities) by Node B (i.e. p_2) is

2.2719715556912097

Total payments in to Node C is 7.000337454670318 in round 9.

- Liabilities for Node C

Liability of Node C to Node A (i.e. P_20) is 3.0

Liability of Node C to Node B (i.e. P_21) is 1.0

Total nominal liabilities for Node C (i.e. p_bar_3) is 4.0

Payment out is min[payment out, total cash flow] i.e. min[4.0, 11.00033745467032]

- Total Dollar Payment Vector for round 9 and Node C

Total Dollar Payment Vector for round 9 and Node C updated with value 4.0

TOTAL PAYMENT VECTOR - round 9

Total payment by Node A (i.e. p_1): 6.993987555614904
Total payment by Node B (i.e. p_2): 2.271634101020892
Total payment by Node C (i.e. p_3): 4.0
[6.993987555614904, 2.271634101020892, 4.0]

UPDATE EQUITY (i.e. BOOK VALUE) FOR EACH NODE - round 9

Node A

Total operating cash flow (exogenous assets) 3.0.
Relative Payment in to Node A from Node B is 0.4375
Total dollar payment (i.e. liabilities) by Node B (i.e. p_2) is
2.2719715556912097
Relative Payment in to Node A from Node C is 0.75
Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0
Total payments in to Node A is 3.993987555614904 in round 9.
Total dollar payment (i.e. liabilities) by Node A (i.e. p_1) is
6.993987555614904
Equity Vector for round 9 and Node A
Equity Vector for round 9 and Node A updated with value 0.0 i.e. total cash flow
6.993987555614904 minus total payments out (liabilities) 6.993987555614904.

Node B

Total operating cash flow (exogenous assets) 0.0.
Relative Payment in to Node B from Node A is 0.181818181818182
Total dollar payment (i.e. liabilities) by Node A (i.e. p_1) is
6.993987555614904
Relative Payment in to Node B from Node C is 0.25
Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0
Total payments in to Node B is 2.271634101020892 in round 9.
Total dollar payment (i.e. liabilities) by Node B (i.e. p_2) is
2.271634101020892
Equity Vector for round 9 and Node B
Equity Vector for round 9 and Node B updated with value 0.0 i.e. total cash flow
2.271634101020892 minus total payments out (liabilities) 2.271634101020892.

Node C

Total operating cash flow (exogenous assets) 4.0.
Relative Payment in to Node C from Node A is 0.8181818181818182
Total dollar payment (i.e. liabilities) by Node A (i.e. p_1) is
6.993987555614904
Relative Payment in to Node C from Node B is 0.5625
Total dollar payment (i.e. liabilities) by Node B (i.e. p_2) is
2.2719715556912097
Total payments in to Node C is 7.000337454670318 in round 9.
Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0

Equity Vector for round 9 and Node C
Equity Vector for round 9 and Node C updated with value 7.000337454670319 i.e.
total cash flow 11.00033745467032 minus total payments out (liabilities) 4.0.

EQUITY FOR EACH NODE - round 9

Equity for Node A: 0.0
Equity for Node B: 0.0
Equity for Node C: 7.000337454670319
[0.0, 0.0, 7.000337454670319]

ROUND 9 DEFAULTERS

Node A has defaulted in round 9
{'A': True, 'B': True, 'C': False}
The payment vectors for the previous round and current round (i.e. round 9) are
not identical, algorithm will proceed for another round.

END OF ROUND 9

START OF ROUND 10

TOTAL OBLIGATION VECTOR - round 10

i.e. total nominal obligations for each node i.e. p_{bar_i}
Total nominal obligation for Node A (i.e. p_{bar_1}): 11.0
Total nominal obligation for Node B (i.e. p_{bar_2}): 16.0
Total nominal obligation for Node C (i.e. p_{bar_3}): 4.0

TOTAL PAYMENT MADE PER NODE - round 10

i.e. $\min[\text{nominal obligations, cashflow (payments in + exogenous cash flow)}]$ for
each node...

Node A

- Total payments in for Node A
Relative Payment in to Node A from Node B is 0.4375
Total dollar payment (i.e. liabilities) by Node B (i.e. p_2) is 2.271634101020892
Relative Payment in to Node A from Node C is 0.75
Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0
Total payments in to Node A is 3.99383991919664 in round 10.

- Liabilities for Node A
Liability of Node A to Node B (i.e. P_01) is 2.0
Liability of Node A to Node C (i.e. P_02) is 9.0
Total nominal liabilities for Node A (i.e. p_bar_1) is 11.0

Payment out is min[payment out, total cash flow] i.e. min[11.0, 6.99383991919664]
Relative Payment in to Node A from Node B is 0.4375
Total dollar payment (i.e. liabilities) by Node B (i.e. p_2) is 2.271634101020892
Relative Payment in to Node A from Node C is 0.75
Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0
Total payments in to Node A is 3.99383991919664 in round 10.
Relative Payment in to Node A from Node B is 0.4375
Total dollar payment (i.e. liabilities) by Node B (i.e. p_2) is 2.271634101020892
Relative Payment in to Node A from Node C is 0.75
Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0
Total payments in to Node A is 3.99383991919664 in round 10.
Relative Payment in to Node A from Node B is 0.4375
Total dollar payment (i.e. liabilities) by Node B (i.e. p_2) is 2.271634101020892
Relative Payment in to Node A from Node C is 0.75
Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0
Total payments in to Node A is 3.99383991919664 in round 10.
Round 10 and Node A has defaulted due to nominal obligations 11.0 being greater than cash flow 6.99383991919664. Default loss for Node A is 0.0

- Total Dollar Payment Vector for round 10 and Node A
Total Dollar Payment Vector for round 10 and Node A updated with value 6.99383991919664

Node B

- Total payments in for Node B
Relative Payment in to Node B from Node A is 0.18181818181818182
Total dollar payment (i.e. liabilities) by Node A (i.e. p_1) is 6.993987555614904
Relative Payment in to Node B from Node C is 0.25

Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0
Total payments in to Node B is 2.271634101020892 in round 10.

- Liabilities for Node B

Liability of Node B to Node A (i.e. P_10) is 7.0

Liability of Node B to Node C (i.e. P_12) is 9.0

Total nominal liabilities for Node B (i.e. p_bar_2) is 16.0

Payment out is min[payment out, total cash flow] i.e. min[16.0,
2.271634101020892]

Relative Payment in to Node B from Node A is 0.181818181818182

Total dollar payment (i.e. liabilities) by Node A (i.e. p_1) is
6.993987555614904

Relative Payment in to Node B from Node C is 0.25

Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0

Total payments in to Node B is 2.271634101020892 in round 10.

Relative Payment in to Node B from Node A is 0.181818181818182

Total dollar payment (i.e. liabilities) by Node A (i.e. p_1) is
6.993987555614904

Relative Payment in to Node B from Node C is 0.25

Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0

Total payments in to Node B is 2.271634101020892 in round 10.

Relative Payment in to Node B from Node A is 0.181818181818182

Total dollar payment (i.e. liabilities) by Node A (i.e. p_1) is
6.993987555614904

Relative Payment in to Node B from Node C is 0.25

Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0

Total payments in to Node B is 2.271634101020892 in round 10.

Round 10 and Node B has defaulted due to nominal obligations 16.0 being greater
than cash flow 2.271634101020892. Default loss for Node B is 0.0

- Total Dollar Payment Vector for round 10 and Node B

Total Dollar Payment Vector for round 10 and Node B updated with value
2.271634101020892

Node C

- Total payments in for Node C

Relative Payment in to Node C from Node A is 0.81818181818182

Total dollar payment (i.e. liabilities) by Node A (i.e. p_1) is
6.993987555614904

Relative Payment in to Node C from Node B is 0.5625

Total dollar payment (i.e. liabilities) by Node B (i.e. p_2) is
2.271634101020892

Total payments in to Node C is 7.000147636418265 in round 10.

- Liabilities for Node C

Liability of Node C to Node A (i.e. P_20) is 3.0

Liability of Node C to Node B (i.e. P_{21}) is 1.0
Total nominal liabilities for Node C (i.e. p_{bar_3}) is 4.0

Payment out is $\min[\text{payment out}, \text{total cash flow}]$ i.e. $\min[4.0, 11.000147636418266]$

- Total Dollar Payment Vector for round 10 and Node C
Total Dollar Payment Vector for round 10 and Node C updated with value 4.0

TOTAL PAYMENT VECTOR - round 10

Total payment by Node A (i.e. p_1): 6.99383991919664
Total payment by Node B (i.e. p_2): 2.271634101020892
Total payment by Node C (i.e. p_3): 4.0
[6.99383991919664, 2.271634101020892, 4.0]

UPDATE EQUITY (i.e. BOOK VALUE) FOR EACH NODE - round 10

Node A

Total operating cash flow (exogenous assets) 3.0.
Relative Payment in to Node A from Node B is 0.4375
Total dollar payment (i.e. liabilities) by Node B (i.e. p_2) is 2.271634101020892
Relative Payment in to Node A from Node C is 0.75
Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0
Total payments in to Node A is 3.99383991919664 in round 10.
Total dollar payment (i.e. liabilities) by Node A (i.e. p_1) is 6.99383991919664
Equity Vector for round 10 and Node A
Equity Vector for round 10 and Node A updated with value 0.0 i.e. total cash flow 6.99383991919664 minus total payments out (liabilities) 6.99383991919664.

Node B

Total operating cash flow (exogenous assets) 0.0.
Relative Payment in to Node B from Node A is 0.18181818181818182
Total dollar payment (i.e. liabilities) by Node A (i.e. p_1) is 6.993987555614904
Relative Payment in to Node B from Node C is 0.25
Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0
Total payments in to Node B is 2.271634101020892 in round 10.
Total dollar payment (i.e. liabilities) by Node B (i.e. p_2) is 2.271634101020892
Equity Vector for round 10 and Node B
Equity Vector for round 10 and Node B updated with value 0.0 i.e. total cash flow 2.271634101020892 minus total payments out (liabilities)

2.271634101020892.

Node C

Total operating cash flow (exogenous assets) 4.0.

Relative Payment in to Node C from Node A is 0.8181818181818182

Total dollar payment (i.e. liabilities) by Node A (i.e. p_1) is
6.993987555614904

Relative Payment in to Node C from Node B is 0.5625

Total dollar payment (i.e. liabilities) by Node B (i.e. p_2) is
2.271634101020892

Total payments in to Node C is 7.000147636418265 in round 10.

Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0

Equity Vector for round 10 and Node C

Equity Vector for round 10 and Node C updated with value 7.000147636418266 i.e.
total cash flow 11.000147636418266 minus total payments out (liabilities) 4.0.

EQUITY FOR EACH NODE - round 10

Equity for Node A: 0.0

Equity for Node B: 0.0

Equity for Node C: 7.000147636418266

[0.0, 0.0, 7.000147636418266]

ROUND 10 DEFAULTERS

Node A has defaulted in round 10

{'A': True, 'B': True, 'C': False}

The payment vectors for the previous round and current round (i.e. round 10) are
not identical, algorithm will proceed for another round.

END OF ROUND 10

START OF ROUND 11

TOTAL OBLIGATION VECTOR - round 11

i.e. total nominal obligations for each node i.e. \bar{p}_i ...

Total nominal obligation for Node A (i.e. p_{bar_1}): 11.0
Total nominal obligation for Node B (i.e. p_{bar_2}): 16.0
Total nominal obligation for Node C (i.e. p_{bar_3}): 4.0

TOTAL PAYMENT MADE PER NODE - round 11

i.e. $\min[\text{nominal obligations, cashflow (payments in + exogenous cash flow)}]$ for each node...

Node A

- Total payments in for Node A

Relative Payment in to Node A from Node B is 0.4375

Total dollar payment (i.e. liabilities) by Node B (i.e. p_2) is
2.271634101020892

Relative Payment in to Node A from Node C is 0.75

Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0

Total payments in to Node A is 3.99383991919664 in round 11.

- Liabilities for Node A

Liability of Node A to Node B (i.e. P_{01}) is 2.0

Liability of Node A to Node C (i.e. P_{02}) is 9.0

Total nominal liabilities for Node A (i.e. p_{bar_1}) is 11.0

Payment out is $\min[\text{payment out, total cash flow}]$ i.e. $\min[11.0, 6.99383991919664]$

Relative Payment in to Node A from Node B is 0.4375

Total dollar payment (i.e. liabilities) by Node B (i.e. p_2) is
2.271634101020892

Relative Payment in to Node A from Node C is 0.75

Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0

Total payments in to Node A is 3.99383991919664 in round 11.

Relative Payment in to Node A from Node B is 0.4375

Total dollar payment (i.e. liabilities) by Node B (i.e. p_2) is
2.271634101020892

Relative Payment in to Node A from Node C is 0.75

Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0

Total payments in to Node A is 3.99383991919664 in round 11.

Relative Payment in to Node A from Node B is 0.4375

Total dollar payment (i.e. liabilities) by Node B (i.e. p_2) is
2.271634101020892

Relative Payment in to Node A from Node C is 0.75

Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0

Total payments in to Node A is 3.99383991919664 in round 11.

Round 11 and Node A has defaulted due to nominal obligations 11.0 being greater than cash flow 6.99383991919664. Default loss for Node A is 0.0

- Total Dollar Payment Vector for round 11 and Node A
Total Dollar Payment Vector for round 11 and Node A updated with value
6.99383991919664

Node B

- Total payments in for Node B
Relative Payment in to Node B from Node A is 0.181818181818182
Total dollar payment (i.e. liabilities) by Node A (i.e. p_1) is 6.99383991919664
Relative Payment in to Node B from Node C is 0.25
Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0
Total payments in to Node B is 2.2716072580357527 in round 11.

- Liabilities for Node B
Liability of Node B to Node A (i.e. P_10) is 7.0
Liability of Node B to Node C (i.e. P_12) is 9.0
Total nominal liabilities for Node B (i.e. p_bar_2) is 16.0

Payment out is min[payment out, total cash flow] i.e. min[16.0,
2.2716072580357527]
Relative Payment in to Node B from Node A is 0.181818181818182
Total dollar payment (i.e. liabilities) by Node A (i.e. p_1) is 6.99383991919664
Relative Payment in to Node B from Node C is 0.25
Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0
Total payments in to Node B is 2.2716072580357527 in round 11.
Relative Payment in to Node B from Node A is 0.181818181818182
Total dollar payment (i.e. liabilities) by Node A (i.e. p_1) is 6.99383991919664
Relative Payment in to Node B from Node C is 0.25
Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0
Total payments in to Node B is 2.2716072580357527 in round 11.
Relative Payment in to Node B from Node A is 0.181818181818182
Total dollar payment (i.e. liabilities) by Node A (i.e. p_1) is 6.99383991919664
Relative Payment in to Node B from Node C is 0.25
Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0
Total payments in to Node B is 2.2716072580357527 in round 11.
Round 11 and Node B has defaulted due to nominal obligations 16.0 being greater
than cash flow 2.2716072580357527. Default loss for Node B is 0.0

- Total Dollar Payment Vector for round 11 and Node B
Total Dollar Payment Vector for round 11 and Node B updated with value
2.2716072580357527

Node C

- Total payments in for Node C
Relative Payment in to Node C from Node A is 0.8181818181818182
Total dollar payment (i.e. liabilities) by Node A (i.e. p_1) is 6.99383991919664

Relative Payment in to Node C from Node B is 0.5625
Total dollar payment (i.e. liabilities) by Node B (i.e. p_2) is
2.271634101020892
Total payments in to Node C is 7.0000268429851396 in round 11.

- Liabilities for Node C

Liability of Node C to Node A (i.e. P_20) is 3.0
Liability of Node C to Node B (i.e. P_21) is 1.0
Total nominal liabilities for Node C (i.e. p_bar_3) is 4.0

Payment out is min[payment out, total cash flow] i.e. min[4.0,
11.00002684298514]

- Total Dollar Payment Vector for round 11 and Node C

Total Dollar Payment Vector for round 11 and Node C updated with value 4.0

TOTAL PAYMENT VECTOR - round 11

Total payment by Node A (i.e. p_1): 6.99383991919664
Total payment by Node B (i.e. p_2): 2.2716072580357527
Total payment by Node C (i.e. p_3): 4.0
[6.99383991919664, 2.2716072580357527, 4.0]

UPDATE EQUITY (i.e. BOOK VALUE) FOR EACH NODE - round 11

Node A

Total operating cash flow (exogenous assets) 3.0.
Relative Payment in to Node A from Node B is 0.4375
Total dollar payment (i.e. liabilities) by Node B (i.e. p_2) is
2.271634101020892
Relative Payment in to Node A from Node C is 0.75
Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0
Total payments in to Node A is 3.99383991919664 in round 11.
Total dollar payment (i.e. liabilities) by Node A (i.e. p_1) is 6.99383991919664
Equity Vector for round 11 and Node A
Equity Vector for round 11 and Node A updated with value 0.0 i.e. total cash
flow 6.99383991919664 minus total payments out (liabilities) 6.99383991919664.

Node B

Total operating cash flow (exogenous assets) 0.0.
Relative Payment in to Node B from Node A is 0.18181818181818182
Total dollar payment (i.e. liabilities) by Node A (i.e. p_1) is 6.99383991919664
Relative Payment in to Node B from Node C is 0.25
Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0

Total payments in to Node B is 2.2716072580357527 in round 11.
Total dollar payment (i.e. liabilities) by Node B (i.e. p_2) is
2.2716072580357527
Equity Vector for round 11 and Node B
Equity Vector for round 11 and Node B updated with value 0.0 i.e. total cash
flow 2.2716072580357527 minus total payments out (liabilities)
2.2716072580357527.

Node C

Total operating cash flow (exogenous assets) 4.0.
Relative Payment in to Node C from Node A is 0.8181818181818182
Total dollar payment (i.e. liabilities) by Node A (i.e. p_1) is 6.99383991919664
Relative Payment in to Node C from Node B is 0.5625
Total dollar payment (i.e. liabilities) by Node B (i.e. p_2) is
2.271634101020892
Total payments in to Node C is 7.0000268429851396 in round 11.
Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0
Equity Vector for round 11 and Node C
Equity Vector for round 11 and Node C updated with value 7.0000268429851396 i.e.
total cash flow 11.00002684298514 minus total payments out (liabilities) 4.0.

EQUITY FOR EACH NODE - round 11

Equity for Node A: 0.0
Equity for Node B: 0.0
Equity for Node C: 7.0000268429851396
[0.0, 0.0, 7.0000268429851396]

ROUND 11 DEFAULTERS

Node A has defaulted in round 11
{'A': True, 'B': True, 'C': False}
The payment vectors for the previous round and current round (i.e. round 11) are
not identical, algorithm will proceed for another round.

END OF ROUND 11

START OF ROUND 12

TOTAL OBLIGATION VECTOR - round 12

i.e. total nominal obligations for each node i.e. $p_{\bar{i}}$
Total nominal obligation for Node A (i.e. $p_{\bar{1}}$): 11.0
Total nominal obligation for Node B (i.e. $p_{\bar{2}}$): 16.0
Total nominal obligation for Node C (i.e. $p_{\bar{3}}$): 4.0

TOTAL PAYMENT MADE PER NODE - round 12

i.e. $\min[\text{nominal obligations, cashflow (payments in + exogenous cash flow)}]$ for each node...

Node A

- Total payments in for Node A
Relative Payment in to Node A from Node B is 0.4375
Total dollar payment (i.e. liabilities) by Node B (i.e. p_2) is 2.2716072580357527
Relative Payment in to Node A from Node C is 0.75
Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0
Total payments in to Node A is 3.9938281753906417 in round 12.

- Liabilities for Node A
Liability of Node A to Node B (i.e. P_{01}) is 2.0
Liability of Node A to Node C (i.e. P_{02}) is 9.0
Total nominal liabilities for Node A (i.e. $p_{\bar{1}}$) is 11.0

Payment out is $\min[\text{payment out, total cash flow}]$ i.e. $\min[11.0, 6.993828175390641]$

Relative Payment in to Node A from Node B is 0.4375
Total dollar payment (i.e. liabilities) by Node B (i.e. p_2) is 2.2716072580357527
Relative Payment in to Node A from Node C is 0.75
Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0
Total payments in to Node A is 3.9938281753906417 in round 12.
Relative Payment in to Node A from Node B is 0.4375
Total dollar payment (i.e. liabilities) by Node B (i.e. p_2) is 2.2716072580357527
Relative Payment in to Node A from Node C is 0.75
Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0
Total payments in to Node A is 3.9938281753906417 in round 12.
Relative Payment in to Node A from Node B is 0.4375
Total dollar payment (i.e. liabilities) by Node B (i.e. p_2) is 2.2716072580357527

Relative Payment in to Node A from Node C is 0.75
Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0
Total payments in to Node A is 3.9938281753906417 in round 12.
Round 12 and Node A has defaulted due to nominal obligations 11.0 being greater than cash flow 6.993828175390641. Default loss for Node A is 0.0

- Total Dollar Payment Vector for round 12 and Node A
Total Dollar Payment Vector for round 12 and Node A updated with value 6.993828175390641

Node B

- Total payments in for Node B
Relative Payment in to Node B from Node A is 0.181818181818182
Total dollar payment (i.e. liabilities) by Node A (i.e. p_1) is 6.99383991919664
Relative Payment in to Node B from Node C is 0.25
Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0
Total payments in to Node B is 2.2716072580357527 in round 12.

- Liabilities for Node B
Liability of Node B to Node A (i.e. P_10) is 7.0
Liability of Node B to Node C (i.e. P_12) is 9.0
Total nominal liabilities for Node B (i.e. p_bar_2) is 16.0

Payment out is min[payment out, total cash flow] i.e. min[16.0, 2.2716072580357527]
Relative Payment in to Node B from Node A is 0.181818181818182
Total dollar payment (i.e. liabilities) by Node A (i.e. p_1) is 6.99383991919664
Relative Payment in to Node B from Node C is 0.25
Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0
Total payments in to Node B is 2.2716072580357527 in round 12.
Relative Payment in to Node B from Node A is 0.181818181818182
Total dollar payment (i.e. liabilities) by Node A (i.e. p_1) is 6.99383991919664
Relative Payment in to Node B from Node C is 0.25
Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0
Total payments in to Node B is 2.2716072580357527 in round 12.
Relative Payment in to Node B from Node A is 0.181818181818182
Total dollar payment (i.e. liabilities) by Node A (i.e. p_1) is 6.99383991919664
Relative Payment in to Node B from Node C is 0.25
Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0
Total payments in to Node B is 2.2716072580357527 in round 12.
Round 12 and Node B has defaulted due to nominal obligations 16.0 being greater than cash flow 2.2716072580357527. Default loss for Node B is 0.0

- Total Dollar Payment Vector for round 12 and Node B
Total Dollar Payment Vector for round 12 and Node B updated with value 2.2716072580357527

Node C

- Total payments in for Node C

Relative Payment in to Node C from Node A is 0.8181818181818182

Total dollar payment (i.e. liabilities) by Node A (i.e. p_1) is 6.99383991919664

Relative Payment in to Node C from Node B is 0.5625

Total dollar payment (i.e. liabilities) by Node B (i.e. p_2) is

2.2716072580357527

Total payments in to Node C is 7.000011743805999 in round 12.

- Liabilities for Node C

Liability of Node C to Node A (i.e. P_20) is 3.0

Liability of Node C to Node B (i.e. P_21) is 1.0

Total nominal liabilities for Node C (i.e. p_bar_3) is 4.0

Payment out is min[payment out, total cash flow] i.e. min[4.0,
11.000011743805999]

- Total Dollar Payment Vector for round 12 and Node C

Total Dollar Payment Vector for round 12 and Node C updated with value 4.0

TOTAL PAYMENT VECTOR - round 12

Total payment by Node A (i.e. p_1): 6.993828175390641

Total payment by Node B (i.e. p_2): 2.2716072580357527

Total payment by Node C (i.e. p_3): 4.0

[6.993828175390641, 2.2716072580357527, 4.0]

UPDATE EQUITY (i.e. BOOK VALUE) FOR EACH NODE - round 12

Node A

Total operating cash flow (exogenous assets) 3.0.

Relative Payment in to Node A from Node B is 0.4375

Total dollar payment (i.e. liabilities) by Node B (i.e. p_2) is

2.2716072580357527

Relative Payment in to Node A from Node C is 0.75

Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0

Total payments in to Node A is 3.9938281753906417 in round 12.

Total dollar payment (i.e. liabilities) by Node A (i.e. p_1) is

6.993828175390641

Equity Vector for round 12 and Node A

Equity Vector for round 12 and Node A updated with value 0.0 i.e. total cash
flow 6.993828175390641 minus total payments out (liabilities)

6.993828175390641.

Node B

Total operating cash flow (exogenous assets) 0.0.
Relative Payment in to Node B from Node A is 0.181818181818182
Total dollar payment (i.e. liabilities) by Node A (i.e. p_1) is 6.99383991919664
Relative Payment in to Node B from Node C is 0.25
Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0
Total payments in to Node B is 2.2716072580357527 in round 12.
Total dollar payment (i.e. liabilities) by Node B (i.e. p_2) is
2.2716072580357527
Equity Vector for round 12 and Node B
Equity Vector for round 12 and Node B updated with value 0.0 i.e. total cash
flow 2.2716072580357527 minus total payments out (liabilities)
2.2716072580357527.

Node C

Total operating cash flow (exogenous assets) 4.0.
Relative Payment in to Node C from Node A is 0.8181818181818182
Total dollar payment (i.e. liabilities) by Node A (i.e. p_1) is 6.99383991919664
Relative Payment in to Node C from Node B is 0.5625
Total dollar payment (i.e. liabilities) by Node B (i.e. p_2) is
2.2716072580357527
Total payments in to Node C is 7.000011743805999 in round 12.
Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0
Equity Vector for round 12 and Node C
Equity Vector for round 12 and Node C updated with value 7.000011743805999 i.e.
total cash flow 11.000011743805999 minus total payments out (liabilities) 4.0.

EQUITY FOR EACH NODE - round 12

Equity for Node A: 0.0
Equity for Node B: 0.0
Equity for Node C: 7.000011743805999
[0.0, 0.0, 7.000011743805999]

ROUND 12 DEFAULTERS

Node A has defaulted in round 12
{ 'A': True, 'B': True, 'C': False }
The payment vectors for the previous round and current round (i.e. round 12) are
not identical, algorithm will proceed for another round.

END OF ROUND 12

START OF ROUND 13

TOTAL OBLIGATION VECTOR - round 13

i.e. total nominal obligations for each node i.e. $p_{\bar{i}}$
Total nominal obligation for Node A (i.e. $p_{\bar{1}}$): 11.0
Total nominal obligation for Node B (i.e. $p_{\bar{2}}$): 16.0
Total nominal obligation for Node C (i.e. $p_{\bar{3}}$): 4.0

TOTAL PAYMENT MADE PER NODE - round 13

i.e. $\min[\text{nominal obligations, cashflow (payments in + exogenous cash flow)}]$ for each node...

Node A

- Total payments in for Node A
Relative Payment in to Node A from Node B is 0.4375
Total dollar payment (i.e. liabilities) by Node B (i.e. p_2) is 2.2716072580357527
Relative Payment in to Node A from Node C is 0.75
Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0
Total payments in to Node A is 3.9938281753906417 in round 13.

- Liabilities for Node A
Liability of Node A to Node B (i.e. P_{01}) is 2.0
Liability of Node A to Node C (i.e. P_{02}) is 9.0
Total nominal liabilities for Node A (i.e. $p_{\bar{1}}$) is 11.0

Payment out is $\min[\text{payment out, total cash flow}]$ i.e. $\min[11.0, 6.993828175390641]$
Relative Payment in to Node A from Node B is 0.4375
Total dollar payment (i.e. liabilities) by Node B (i.e. p_2) is 2.2716072580357527
Relative Payment in to Node A from Node C is 0.75
Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0
Total payments in to Node A is 3.9938281753906417 in round 13.
Relative Payment in to Node A from Node B is 0.4375
Total dollar payment (i.e. liabilities) by Node B (i.e. p_2) is

2.2716072580357527

Relative Payment in to Node A from Node C is 0.75

Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0

Total payments in to Node A is 3.9938281753906417 in round 13.

Relative Payment in to Node A from Node B is 0.4375

Total dollar payment (i.e. liabilities) by Node B (i.e. p_2) is

2.2716072580357527

Relative Payment in to Node A from Node C is 0.75

Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0

Total payments in to Node A is 3.9938281753906417 in round 13.

Round 13 and Node A has defaulted due to nominal obligations 11.0 being greater than cash flow 6.993828175390641. Default loss for Node A is 0.0

- Total Dollar Payment Vector for round 13 and Node A

Total Dollar Payment Vector for round 13 and Node A updated with value 6.993828175390641

Node B

- Total payments in for Node B

Relative Payment in to Node B from Node A is 0.181818181818182

Total dollar payment (i.e. liabilities) by Node A (i.e. p_1) is

6.993828175390641

Relative Payment in to Node B from Node C is 0.25

Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0

Total payments in to Node B is 2.2716051227982987 in round 13.

- Liabilities for Node B

Liability of Node B to Node A (i.e. P_10) is 7.0

Liability of Node B to Node C (i.e. P_12) is 9.0

Total nominal liabilities for Node B (i.e. p_bar_2) is 16.0

Payment out is min[payment out, total cash flow] i.e. min[16.0, 2.2716051227982987]

Relative Payment in to Node B from Node A is 0.181818181818182

Total dollar payment (i.e. liabilities) by Node A (i.e. p_1) is

6.993828175390641

Relative Payment in to Node B from Node C is 0.25

Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0

Total payments in to Node B is 2.2716051227982987 in round 13.

Relative Payment in to Node B from Node A is 0.181818181818182

Total dollar payment (i.e. liabilities) by Node A (i.e. p_1) is

6.993828175390641

Relative Payment in to Node B from Node C is 0.25

Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0

Total payments in to Node B is 2.2716051227982987 in round 13.

Relative Payment in to Node B from Node A is 0.181818181818182

Total dollar payment (i.e. liabilities) by Node A (i.e. p_1) is

6.993828175390641

Relative Payment in to Node B from Node C is 0.25

Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0

Total payments in to Node B is 2.2716051227982987 in round 13.

Round 13 and Node B has defaulted due to nominal obligations 16.0 being greater than cash flow 2.2716051227982987. Default loss for Node B is 0.0

- Total Dollar Payment Vector for round 13 and Node B

Total Dollar Payment Vector for round 13 and Node B updated with value 2.2716051227982987

Node C

- Total payments in for Node C

Relative Payment in to Node C from Node A is 0.8181818181818182

Total dollar payment (i.e. liabilities) by Node A (i.e. p_1) is 6.993828175390641

Relative Payment in to Node C from Node B is 0.5625

Total dollar payment (i.e. liabilities) by Node B (i.e. p_2) is 2.2716072580357527

Total payments in to Node C is 7.000002135237454 in round 13.

- Liabilities for Node C

Liability of Node C to Node A (i.e. P_20) is 3.0

Liability of Node C to Node B (i.e. P_21) is 1.0

Total nominal liabilities for Node C (i.e. p_bar_3) is 4.0

Payment out is min[payment out, total cash flow] i.e. min[4.0, 11.000002135237455]

- Total Dollar Payment Vector for round 13 and Node C

Total Dollar Payment Vector for round 13 and Node C updated with value 4.0

TOTAL PAYMENT VECTOR - round 13

Total payment by Node A (i.e. p_1): 6.993828175390641

Total payment by Node B (i.e. p_2): 2.2716051227982987

Total payment by Node C (i.e. p_3): 4.0

[6.993828175390641, 2.2716051227982987, 4.0]

UPDATE EQUITY (i.e. BOOK VALUE) FOR EACH NODE - round 13

Node A

Total operating cash flow (exogenous assets) 3.0.

Relative Payment in to Node A from Node B is 0.4375
 Total dollar payment (i.e. liabilities) by Node B (i.e. p_2) is
 2.2716072580357527
 Relative Payment in to Node A from Node C is 0.75
 Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0
 Total payments in to Node A is 3.9938281753906417 in round 13.
 Total dollar payment (i.e. liabilities) by Node A (i.e. p_1) is
 6.993828175390641
 Equity Vector for round 13 and Node A
 Equity Vector for round 13 and Node A updated with value 0.0 i.e. total cash
 flow 6.993828175390641 minus total payments out (liabilities)
 6.993828175390641.

Node B

Total operating cash flow (exogenous assets) 0.0.
 Relative Payment in to Node B from Node A is 0.181818181818182
 Total dollar payment (i.e. liabilities) by Node A (i.e. p_1) is
 6.993828175390641
 Relative Payment in to Node B from Node C is 0.25
 Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0
 Total payments in to Node B is 2.2716051227982987 in round 13.
 Total dollar payment (i.e. liabilities) by Node B (i.e. p_2) is
 2.2716051227982987
 Equity Vector for round 13 and Node B
 Equity Vector for round 13 and Node B updated with value 0.0 i.e. total cash
 flow 2.2716051227982987 minus total payments out (liabilities)
 2.2716051227982987.

Node C

Total operating cash flow (exogenous assets) 4.0.
 Relative Payment in to Node C from Node A is 0.8181818181818182
 Total dollar payment (i.e. liabilities) by Node A (i.e. p_1) is
 6.993828175390641
 Relative Payment in to Node C from Node B is 0.5625
 Total dollar payment (i.e. liabilities) by Node B (i.e. p_2) is
 2.2716072580357527
 Total payments in to Node C is 7.000002135237454 in round 13.
 Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0
 Equity Vector for round 13 and Node C
 Equity Vector for round 13 and Node C updated with value 7.000002135237455 i.e.
 total cash flow 11.000002135237455 minus total payments out (liabilities) 4.0.

EQUITY FOR EACH NODE - round 13

Equity for Node A: 0.0

Equity for Node B: 0.0
Equity for Node C: 7.000002135237455
[0.0, 0.0, 7.000002135237455]

ROUND 13 DEFAULTERS

Node A has defaulted in round 13
{'A': True, 'B': True, 'C': False}
The payment vectors for the previous round and current round (i.e. round 13) are not identical, algorithm will proceed for another round.

END OF ROUND 13

START OF ROUND 14

TOTAL OBLIGATION VECTOR - round 14

i.e. total nominal obligations for each node i.e. p_bar_i...
Total nominal obligation for Node A (i.e. p_bar_1): 11.0
Total nominal obligation for Node B (i.e. p_bar_2): 16.0
Total nominal obligation for Node C (i.e. p_bar_3): 4.0

TOTAL PAYMENT MADE PER NODE - round 14

i.e. min[nominal obligations, cashflow (payments in + exogenous cash flow)] for each node...

Node A

- Total payments in for Node A
Relative Payment in to Node A from Node B is 0.4375
Total dollar payment (i.e. liabilities) by Node B (i.e. p_2) is 2.2716051227982987
Relative Payment in to Node A from Node C is 0.75
Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0
Total payments in to Node A is 3.9938272412242557 in round 14.

- Liabilities for Node A

Liability of Node A to Node B (i.e. P_{01}) is 2.0
Liability of Node A to Node C (i.e. P_{02}) is 9.0
Total nominal liabilities for Node A (i.e. p_{bar_1}) is 11.0

Payment out is $\min[\text{payment out}, \text{total cash flow}]$ i.e. $\min[11.0, 6.993827241224256]$

Relative Payment in to Node A from Node B is 0.4375
Total dollar payment (i.e. liabilities) by Node B (i.e. p_2) is 2.2716051227982987
Relative Payment in to Node A from Node C is 0.75
Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0
Total payments in to Node A is 3.9938272412242557 in round 14.
Relative Payment in to Node A from Node B is 0.4375
Total dollar payment (i.e. liabilities) by Node B (i.e. p_2) is 2.2716051227982987
Relative Payment in to Node A from Node C is 0.75
Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0
Total payments in to Node A is 3.9938272412242557 in round 14.
Relative Payment in to Node A from Node B is 0.4375
Total dollar payment (i.e. liabilities) by Node B (i.e. p_2) is 2.2716051227982987
Relative Payment in to Node A from Node C is 0.75
Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0
Total payments in to Node A is 3.9938272412242557 in round 14.
Round 14 and Node A has defaulted due to nominal obligations 11.0 being greater than cash flow 6.993827241224256. Default loss for Node A is 0.0

- Total Dollar Payment Vector for round 14 and Node A
Total Dollar Payment Vector for round 14 and Node A updated with value 6.993827241224256

Node B

- Total payments in for Node B
Relative Payment in to Node B from Node A is 0.181818181818182
Total dollar payment (i.e. liabilities) by Node A (i.e. p_1) is 6.993828175390641
Relative Payment in to Node B from Node C is 0.25
Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0
Total payments in to Node B is 2.2716051227982987 in round 14.

- Liabilities for Node B
Liability of Node B to Node A (i.e. P_{10}) is 7.0
Liability of Node B to Node C (i.e. P_{12}) is 9.0
Total nominal liabilities for Node B (i.e. p_{bar_2}) is 16.0

Payment out is $\min[\text{payment out}, \text{total cash flow}]$ i.e. $\min[16.0, 2.2716051227982987]$

Relative Payment in to Node B from Node A is 0.181818181818182
Total dollar payment (i.e. liabilities) by Node A (i.e. p_1) is
6.993828175390641
Relative Payment in to Node B from Node C is 0.25
Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0
Total payments in to Node B is 2.2716051227982987 in round 14.
Relative Payment in to Node B from Node A is 0.181818181818182
Total dollar payment (i.e. liabilities) by Node A (i.e. p_1) is
6.993828175390641
Relative Payment in to Node B from Node C is 0.25
Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0
Total payments in to Node B is 2.2716051227982987 in round 14.
Relative Payment in to Node B from Node A is 0.181818181818182
Total dollar payment (i.e. liabilities) by Node A (i.e. p_1) is
6.993828175390641
Relative Payment in to Node B from Node C is 0.25
Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0
Total payments in to Node B is 2.2716051227982987 in round 14.
Round 14 and Node B has defaulted due to nominal obligations 16.0 being greater
than cash flow 2.2716051227982987. Default loss for Node B is 0.0

- Total Dollar Payment Vector for round 14 and Node B
Total Dollar Payment Vector for round 14 and Node B updated with value
2.2716051227982987

Node C

- Total payments in for Node C
Relative Payment in to Node C from Node A is 0.8181818181818182
Total dollar payment (i.e. liabilities) by Node A (i.e. p_1) is
6.993828175390641
Relative Payment in to Node C from Node B is 0.5625
Total dollar payment (i.e. liabilities) by Node B (i.e. p_2) is
2.2716051227982987
Total payments in to Node C is 7.000000934166387 in round 14.

- Liabilities for Node C
Liability of Node C to Node A (i.e. P_20) is 3.0
Liability of Node C to Node B (i.e. P_21) is 1.0
Total nominal liabilities for Node C (i.e. p_bar_3) is 4.0

Payment out is min[payment out, total cash flow] i.e. min[4.0,
11.000000934166387]

- Total Dollar Payment Vector for round 14 and Node C
Total Dollar Payment Vector for round 14 and Node C updated with value 4.0

TOTAL PAYMENT VECTOR - round 14

Total payment by Node A (i.e. p_1): 6.993827241224256
Total payment by Node B (i.e. p_2): 2.2716051227982987
Total payment by Node C (i.e. p_3): 4.0
[6.993827241224256, 2.2716051227982987, 4.0]

UPDATE EQUITY (i.e. BOOK VALUE) FOR EACH NODE - round 14

Node A

Total operating cash flow (exogenous assets) 3.0.
Relative Payment in to Node A from Node B is 0.4375
Total dollar payment (i.e. liabilities) by Node B (i.e. p_2) is
2.2716051227982987
Relative Payment in to Node A from Node C is 0.75
Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0
Total payments in to Node A is 3.9938272412242557 in round 14.
Total dollar payment (i.e. liabilities) by Node A (i.e. p_1) is
6.993827241224256
Equity Vector for round 14 and Node A
Equity Vector for round 14 and Node A updated with value 0.0 i.e. total cash
flow 6.993827241224256 minus total payments out (liabilities)
6.993827241224256.

Node B

Total operating cash flow (exogenous assets) 0.0.
Relative Payment in to Node B from Node A is 0.18181818181818182
Total dollar payment (i.e. liabilities) by Node A (i.e. p_1) is
6.993828175390641
Relative Payment in to Node B from Node C is 0.25
Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0
Total payments in to Node B is 2.2716051227982987 in round 14.
Total dollar payment (i.e. liabilities) by Node B (i.e. p_2) is
2.2716051227982987
Equity Vector for round 14 and Node B
Equity Vector for round 14 and Node B updated with value 0.0 i.e. total cash
flow 2.2716051227982987 minus total payments out (liabilities)
2.2716051227982987.

Node C

Total operating cash flow (exogenous assets) 4.0.
Relative Payment in to Node C from Node A is 0.8181818181818182
Total dollar payment (i.e. liabilities) by Node A (i.e. p_1) is
6.993828175390641
Relative Payment in to Node C from Node B is 0.5625

Total dollar payment (i.e. liabilities) by Node B (i.e. p_2) is
2.2716051227982987
Total payments in to Node C is 7.000000934166387 in round 14.
Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0
Equity Vector for round 14 and Node C
Equity Vector for round 14 and Node C updated with value 7.000000934166387 i.e.
total cash flow 11.000000934166387 minus total payments out (liabilities) 4.0.

EQUITY FOR EACH NODE - round 14

Equity for Node A: 0.0
Equity for Node B: 0.0
Equity for Node C: 7.000000934166387
[0.0, 0.0, 7.000000934166387]

ROUND 14 DEFAULTERS

Node A has defaulted in round 14
{'A': True, 'B': True, 'C': False}
The payment vectors for the previous round and current round (i.e. round 14) are
not identical, algorithm will proceed for another round.

END OF ROUND 14

START OF ROUND 15

TOTAL OBLIGATION VECTOR - round 15

i.e. total nominal obligations for each node i.e. p_bar_i...
Total nominal obligation for Node A (i.e. p_bar_1): 11.0
Total nominal obligation for Node B (i.e. p_bar_2): 16.0
Total nominal obligation for Node C (i.e. p_bar_3): 4.0

TOTAL PAYMENT MADE PER NODE - round 15

i.e. $\min[\text{nominal obligations, cashflow (payments in + exogenous cash flow)}]$ for each node...

Node A

- Total payments in for Node A

Relative Payment in to Node A from Node B is 0.4375

Total dollar payment (i.e. liabilities) by Node B (i.e. p_2) is 2.2716051227982987

Relative Payment in to Node A from Node C is 0.75

Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0

Total payments in to Node A is 3.9938272412242557 in round 15.

- Liabilities for Node A

Liability of Node A to Node B (i.e. P_{01}) is 2.0

Liability of Node A to Node C (i.e. P_{02}) is 9.0

Total nominal liabilities for Node A (i.e. p_{bar}_1) is 11.0

Payment out is $\min[\text{payment out, total cash flow}]$ i.e. $\min[11.0, 6.993827241224256]$

Relative Payment in to Node A from Node B is 0.4375

Total dollar payment (i.e. liabilities) by Node B (i.e. p_2) is 2.2716051227982987

Relative Payment in to Node A from Node C is 0.75

Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0

Total payments in to Node A is 3.9938272412242557 in round 15.

Relative Payment in to Node A from Node B is 0.4375

Total dollar payment (i.e. liabilities) by Node B (i.e. p_2) is 2.2716051227982987

Relative Payment in to Node A from Node C is 0.75

Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0

Total payments in to Node A is 3.9938272412242557 in round 15.

Relative Payment in to Node A from Node B is 0.4375

Total dollar payment (i.e. liabilities) by Node B (i.e. p_2) is 2.2716051227982987

Relative Payment in to Node A from Node C is 0.75

Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0

Total payments in to Node A is 3.9938272412242557 in round 15.

Round 15 and Node A has defaulted due to nominal obligations 11.0 being greater than cash flow 6.993827241224256. Default loss for Node A is 0.0

- Total Dollar Payment Vector for round 15 and Node A

Total Dollar Payment Vector for round 15 and Node A updated with value 6.993827241224256

Node B

- Total payments in for Node B

Relative Payment in to Node B from Node A is 0.181818181818182
Total dollar payment (i.e. liabilities) by Node A (i.e. p_1) is
6.993827241224256
Relative Payment in to Node B from Node C is 0.25
Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0
Total payments in to Node B is 2.2716049529498648 in round 15.

- Liabilities for Node B

Liability of Node B to Node A (i.e. P_10) is 7.0
Liability of Node B to Node C (i.e. P_12) is 9.0
Total nominal liabilities for Node B (i.e. p_bar_2) is 16.0

Payment out is min[payment out, total cash flow] i.e. min[16.0,
2.2716049529498648]

Relative Payment in to Node B from Node A is 0.181818181818182
Total dollar payment (i.e. liabilities) by Node A (i.e. p_1) is
6.993827241224256
Relative Payment in to Node B from Node C is 0.25
Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0
Total payments in to Node B is 2.2716049529498648 in round 15.
Relative Payment in to Node B from Node A is 0.181818181818182
Total dollar payment (i.e. liabilities) by Node A (i.e. p_1) is
6.993827241224256
Relative Payment in to Node B from Node C is 0.25
Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0
Total payments in to Node B is 2.2716049529498648 in round 15.
Relative Payment in to Node B from Node A is 0.181818181818182
Total dollar payment (i.e. liabilities) by Node A (i.e. p_1) is
6.993827241224256
Relative Payment in to Node B from Node C is 0.25
Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0
Total payments in to Node B is 2.2716049529498648 in round 15.
Round 15 and Node B has defaulted due to nominal obligations 16.0 being greater
than cash flow 2.2716049529498648. Default loss for Node B is 0.0

- Total Dollar Payment Vector for round 15 and Node B

Total Dollar Payment Vector for round 15 and Node B updated with value
2.2716049529498648

Node C

- Total payments in for Node C

Relative Payment in to Node C from Node A is 0.8181818181818182
Total dollar payment (i.e. liabilities) by Node A (i.e. p_1) is
6.993827241224256
Relative Payment in to Node C from Node B is 0.5625
Total dollar payment (i.e. liabilities) by Node B (i.e. p_2) is
2.2716051227982987

Total payments in to Node C is 7.000000169848434 in round 15.

- Liabilities for Node C

Liability of Node C to Node A (i.e. P_{20}) is 3.0

Liability of Node C to Node B (i.e. P_{21}) is 1.0

Total nominal liabilities for Node C (i.e. p_{bar_3}) is 4.0

Payment out is $\min[\text{payment out}, \text{total cash flow}]$ i.e. $\min[4.0, 11.000000169848434]$

- Total Dollar Payment Vector for round 15 and Node C

Total Dollar Payment Vector for round 15 and Node C updated with value 4.0

TOTAL PAYMENT VECTOR - round 15

Total payment by Node A (i.e. p_1): 6.993827241224256

Total payment by Node B (i.e. p_2): 2.2716049529498648

Total payment by Node C (i.e. p_3): 4.0

[6.993827241224256, 2.2716049529498648, 4.0]

UPDATE EQUITY (i.e. BOOK VALUE) FOR EACH NODE - round 15

Node A

Total operating cash flow (exogenous assets) 3.0.

Relative Payment in to Node A from Node B is 0.4375

Total dollar payment (i.e. liabilities) by Node B (i.e. p_2) is 2.2716051227982987

Relative Payment in to Node A from Node C is 0.75

Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0

Total payments in to Node A is 3.9938272412242557 in round 15.

Total dollar payment (i.e. liabilities) by Node A (i.e. p_1) is 6.993827241224256

Equity Vector for round 15 and Node A

Equity Vector for round 15 and Node A updated with value 0.0 i.e. total cash flow 6.993827241224256 minus total payments out (liabilities) 6.993827241224256.

Node B

Total operating cash flow (exogenous assets) 0.0.

Relative Payment in to Node B from Node A is 0.18181818181818182

Total dollar payment (i.e. liabilities) by Node A (i.e. p_1) is 6.993827241224256

Relative Payment in to Node B from Node C is 0.25

Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0

Total payments in to Node B is 2.2716049529498648 in round 15.
Total dollar payment (i.e. liabilities) by Node B (i.e. p_2) is
2.2716049529498648
Equity Vector for round 15 and Node B
Equity Vector for round 15 and Node B updated with value 0.0 i.e. total cash
flow 2.2716049529498648 minus total payments out (liabilities)
2.2716049529498648.

Node C

Total operating cash flow (exogenous assets) 4.0.
Relative Payment in to Node C from Node A is 0.8181818181818182
Total dollar payment (i.e. liabilities) by Node A (i.e. p_1) is
6.993827241224256
Relative Payment in to Node C from Node B is 0.5625
Total dollar payment (i.e. liabilities) by Node B (i.e. p_2) is
2.2716051227982987
Total payments in to Node C is 7.000000169848434 in round 15.
Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0
Equity Vector for round 15 and Node C
Equity Vector for round 15 and Node C updated with value 7.000000169848434 i.e.
total cash flow 11.000000169848434 minus total payments out (liabilities) 4.0.

EQUITY FOR EACH NODE - round 15

Equity for Node A: 0.0
Equity for Node B: 0.0
Equity for Node C: 7.000000169848434
[0.0, 0.0, 7.000000169848434]

ROUND 15 DEFAULTERS

Node A has defaulted in round 15
{'A': True, 'B': True, 'C': False}
The payment vectors for the previous round and current round (i.e. round 15) are
not identical, algorithm will proceed for another round.

END OF ROUND 15

START OF ROUND 16

TOTAL OBLIGATION VECTOR - round 16

i.e. total nominal obligations for each node i.e. $p_{\bar{i}}$
Total nominal obligation for Node A (i.e. $p_{\bar{1}}$): 11.0
Total nominal obligation for Node B (i.e. $p_{\bar{2}}$): 16.0
Total nominal obligation for Node C (i.e. $p_{\bar{3}}$): 4.0

TOTAL PAYMENT MADE PER NODE - round 16

i.e. $\min[\text{nominal obligations, cashflow (payments in + exogenous cash flow)}]$ for each node...

Node A

- Total payments in for Node A
Relative Payment in to Node A from Node B is 0.4375
Total dollar payment (i.e. liabilities) by Node B (i.e. p_2) is 2.2716049529498648
Relative Payment in to Node A from Node C is 0.75
Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0
Total payments in to Node A is 3.993827166915566 in round 16.

- Liabilities for Node A
Liability of Node A to Node B (i.e. P_{01}) is 2.0
Liability of Node A to Node C (i.e. P_{02}) is 9.0
Total nominal liabilities for Node A (i.e. $p_{\bar{1}}$) is 11.0

Payment out is $\min[\text{payment out, total cash flow}]$ i.e. $\min[11.0, 6.993827166915565]$
Relative Payment in to Node A from Node B is 0.4375
Total dollar payment (i.e. liabilities) by Node B (i.e. p_2) is 2.2716049529498648
Relative Payment in to Node A from Node C is 0.75
Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0
Total payments in to Node A is 3.993827166915566 in round 16.
Relative Payment in to Node A from Node B is 0.4375
Total dollar payment (i.e. liabilities) by Node B (i.e. p_2) is 2.2716049529498648
Relative Payment in to Node A from Node C is 0.75
Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0
Total payments in to Node A is 3.993827166915566 in round 16.
Relative Payment in to Node A from Node B is 0.4375
Total dollar payment (i.e. liabilities) by Node B (i.e. p_2) is

2.2716049529498648

Relative Payment in to Node A from Node C is 0.75

Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0

Total payments in to Node A is 3.993827166915566 in round 16.

Round 16 and Node A has defaulted due to nominal obligations 11.0 being greater than cash flow 6.993827166915565. Default loss for Node A is 0.0

- Total Dollar Payment Vector for round 16 and Node A

Total Dollar Payment Vector for round 16 and Node A updated with value 6.993827166915565

Node B

- Total payments in for Node B

Relative Payment in to Node B from Node A is 0.181818181818182

Total dollar payment (i.e. liabilities) by Node A (i.e. p_1) is 6.993827241224256

Relative Payment in to Node B from Node C is 0.25

Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0

Total payments in to Node B is 2.2716049529498648 in round 16.

- Liabilities for Node B

Liability of Node B to Node A (i.e. P_10) is 7.0

Liability of Node B to Node C (i.e. P_12) is 9.0

Total nominal liabilities for Node B (i.e. p_bar_2) is 16.0

Payment out is min[payment out, total cash flow] i.e. min[16.0, 2.2716049529498648]

Relative Payment in to Node B from Node A is 0.181818181818182

Total dollar payment (i.e. liabilities) by Node A (i.e. p_1) is 6.993827241224256

Relative Payment in to Node B from Node C is 0.25

Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0

Total payments in to Node B is 2.2716049529498648 in round 16.

Relative Payment in to Node B from Node A is 0.181818181818182

Total dollar payment (i.e. liabilities) by Node A (i.e. p_1) is 6.993827241224256

Relative Payment in to Node B from Node C is 0.25

Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0

Total payments in to Node B is 2.2716049529498648 in round 16.

Relative Payment in to Node B from Node A is 0.181818181818182

Total dollar payment (i.e. liabilities) by Node A (i.e. p_1) is 6.993827241224256

Relative Payment in to Node B from Node C is 0.25

Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0

Total payments in to Node B is 2.2716049529498648 in round 16.

Round 16 and Node B has defaulted due to nominal obligations 16.0 being greater than cash flow 2.2716049529498648. Default loss for Node B is 0.0

- Total Dollar Payment Vector for round 16 and Node B
Total Dollar Payment Vector for round 16 and Node B updated with value
2.2716049529498648

Node C

- Total payments in for Node C
Relative Payment in to Node C from Node A is 0.8181818181818182
Total dollar payment (i.e. liabilities) by Node A (i.e. p_1) is
6.993827241224256
Relative Payment in to Node C from Node B is 0.5625
Total dollar payment (i.e. liabilities) by Node B (i.e. p_2) is
2.2716049529498648
Total payments in to Node C is 7.000000074308691 in round 16.

- Liabilities for Node C
Liability of Node C to Node A (i.e. P_20) is 3.0
Liability of Node C to Node B (i.e. P_21) is 1.0
Total nominal liabilities for Node C (i.e. p_bar_3) is 4.0

Payment out is min[payment out, total cash flow] i.e. min[4.0,
11.00000007430869]

- Total Dollar Payment Vector for round 16 and Node C
Total Dollar Payment Vector for round 16 and Node C updated with value 4.0

TOTAL PAYMENT VECTOR - round 16

Total payment by Node A (i.e. p_1): 6.993827166915565
Total payment by Node B (i.e. p_2): 2.2716049529498648
Total payment by Node C (i.e. p_3): 4.0
[6.993827166915565, 2.2716049529498648, 4.0]

UPDATE EQUITY (i.e. BOOK VALUE) FOR EACH NODE - round 16

Node A

Total operating cash flow (exogenous assets) 3.0.
Relative Payment in to Node A from Node B is 0.4375
Total dollar payment (i.e. liabilities) by Node B (i.e. p_2) is
2.2716049529498648
Relative Payment in to Node A from Node C is 0.75
Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0
Total payments in to Node A is 3.993827166915566 in round 16.

Total dollar payment (i.e. liabilities) by Node A (i.e. p_1) is
6.993827166915565
Equity Vector for round 16 and Node A
Equity Vector for round 16 and Node A updated with value 0.0 i.e. total cash
flow 6.993827166915565 minus total payments out (liabilities)
6.993827166915565.

Node B

Total operating cash flow (exogenous assets) 0.0.
Relative Payment in to Node B from Node A is 0.181818181818182
Total dollar payment (i.e. liabilities) by Node A (i.e. p_1) is
6.993827241224256
Relative Payment in to Node B from Node C is 0.25
Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0
Total payments in to Node B is 2.2716049529498648 in round 16.
Total dollar payment (i.e. liabilities) by Node B (i.e. p_2) is
2.2716049529498648
Equity Vector for round 16 and Node B
Equity Vector for round 16 and Node B updated with value 0.0 i.e. total cash
flow 2.2716049529498648 minus total payments out (liabilities)
2.2716049529498648.

Node C

Total operating cash flow (exogenous assets) 4.0.
Relative Payment in to Node C from Node A is 0.8181818181818182
Total dollar payment (i.e. liabilities) by Node A (i.e. p_1) is
6.993827241224256
Relative Payment in to Node C from Node B is 0.5625
Total dollar payment (i.e. liabilities) by Node B (i.e. p_2) is
2.2716049529498648
Total payments in to Node C is 7.000000074308691 in round 16.
Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0
Equity Vector for round 16 and Node C
Equity Vector for round 16 and Node C updated with value 7.000000074308691 i.e.
total cash flow 11.00000007430869 minus total payments out (liabilities) 4.0.

EQUITY FOR EACH NODE - round 16

Equity for Node A: 0.0
Equity for Node B: 0.0
Equity for Node C: 7.000000074308691
[0.0, 0.0, 7.000000074308691]

ROUND 16 DEFAULTERS

Node A has defaulted in round 16

{'A': True, 'B': True, 'C': False}

The payment vectors for the previous round and current round (i.e. round 16) are not identical, algorithm will proceed for another round.

END OF ROUND 16

START OF ROUND 17

TOTAL OBLIGATION VECTOR - round 17

i.e. total nominal obligations for each node i.e. p_{bar_i}

Total nominal obligation for Node A (i.e. p_{bar_1}): 11.0

Total nominal obligation for Node B (i.e. p_{bar_2}): 16.0

Total nominal obligation for Node C (i.e. p_{bar_3}): 4.0

TOTAL PAYMENT MADE PER NODE - round 17

i.e. $\min[\text{nominal obligations, cashflow (payments in + exogenous cash flow)}]$ for each node...

Node A

- Total payments in for Node A

Relative Payment in to Node A from Node B is 0.4375

Total dollar payment (i.e. liabilities) by Node B (i.e. p_2) is
2.2716049529498648

Relative Payment in to Node A from Node C is 0.75

Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0

Total payments in to Node A is 3.993827166915566 in round 17.

- Liabilities for Node A

Liability of Node A to Node B (i.e. P_{01}) is 2.0

Liability of Node A to Node C (i.e. P_{02}) is 9.0

Total nominal liabilities for Node A (i.e. p_{bar_1}) is 11.0

Payment out is $\min[\text{payment out, total cash flow}]$ i.e. $\min[11.0, 6.993827166915565]$

Relative Payment in to Node A from Node B is 0.4375
Total dollar payment (i.e. liabilities) by Node B (i.e. p_2) is
2.2716049529498648
Relative Payment in to Node A from Node C is 0.75
Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0
Total payments in to Node A is 3.993827166915566 in round 17.
Relative Payment in to Node A from Node B is 0.4375
Total dollar payment (i.e. liabilities) by Node B (i.e. p_2) is
2.2716049529498648
Relative Payment in to Node A from Node C is 0.75
Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0
Total payments in to Node A is 3.993827166915566 in round 17.
Relative Payment in to Node A from Node B is 0.4375
Total dollar payment (i.e. liabilities) by Node B (i.e. p_2) is
2.2716049529498648
Relative Payment in to Node A from Node C is 0.75
Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0
Total payments in to Node A is 3.993827166915566 in round 17.
Round 17 and Node A has defaulted due to nominal obligations 11.0 being greater
than cash flow 6.993827166915565. Default loss for Node A is 0.0

- Total Dollar Payment Vector for round 17 and Node A
Total Dollar Payment Vector for round 17 and Node A updated with value
6.993827166915565

Node B

- Total payments in for Node B
Relative Payment in to Node B from Node A is 0.181818181818182
Total dollar payment (i.e. liabilities) by Node A (i.e. p_1) is
6.993827166915565
Relative Payment in to Node B from Node C is 0.25
Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0
Total payments in to Node B is 2.271604939439194 in round 17.

- Liabilities for Node B
Liability of Node B to Node A (i.e. P_10) is 7.0
Liability of Node B to Node C (i.e. P_12) is 9.0
Total nominal liabilities for Node B (i.e. p_bar_2) is 16.0

Payment out is min[payment out, total cash flow] i.e. min[16.0,
2.271604939439194]
Relative Payment in to Node B from Node A is 0.181818181818182
Total dollar payment (i.e. liabilities) by Node A (i.e. p_1) is
6.993827166915565
Relative Payment in to Node B from Node C is 0.25
Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0
Total payments in to Node B is 2.271604939439194 in round 17.

Relative Payment in to Node B from Node A is 0.181818181818182
Total dollar payment (i.e. liabilities) by Node A (i.e. p_1) is
6.993827166915565
Relative Payment in to Node B from Node C is 0.25
Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0
Total payments in to Node B is 2.271604939439194 in round 17.
Relative Payment in to Node B from Node A is 0.181818181818182
Total dollar payment (i.e. liabilities) by Node A (i.e. p_1) is
6.993827166915565
Relative Payment in to Node B from Node C is 0.25
Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0
Total payments in to Node B is 2.271604939439194 in round 17.
Round 17 and Node B has defaulted due to nominal obligations 16.0 being greater
than cash flow 2.271604939439194. Default loss for Node B is 0.0

- Total Dollar Payment Vector for round 17 and Node B
Total Dollar Payment Vector for round 17 and Node B updated with value
2.271604939439194

Node C

- Total payments in for Node C
Relative Payment in to Node C from Node A is 0.8181818181818182
Total dollar payment (i.e. liabilities) by Node A (i.e. p_1) is
6.993827166915565
Relative Payment in to Node C from Node B is 0.5625
Total dollar payment (i.e. liabilities) by Node B (i.e. p_2) is
2.2716049529498648
Total payments in to Node C is 7.000000013510672 in round 17.

- Liabilities for Node C
Liability of Node C to Node A (i.e. P_20) is 3.0
Liability of Node C to Node B (i.e. P_21) is 1.0
Total nominal liabilities for Node C (i.e. p_bar_3) is 4.0

Payment out is min[payment out, total cash flow] i.e. min[4.0,
11.000000013510672]

- Total Dollar Payment Vector for round 17 and Node C
Total Dollar Payment Vector for round 17 and Node C updated with value 4.0

TOTAL PAYMENT VECTOR - round 17

Total payment by Node A (i.e. p_1): 6.993827166915565
Total payment by Node B (i.e. p_2): 2.271604939439194
Total payment by Node C (i.e. p_3): 4.0

[6.993827166915565, 2.271604939439194, 4.0]

UPDATE EQUITY (i.e. BOOK VALUE) FOR EACH NODE - round 17

Node A

Total operating cash flow (exogenous assets) 3.0.
Relative Payment in to Node A from Node B is 0.4375
Total dollar payment (i.e. liabilities) by Node B (i.e. p_2) is
2.2716049529498648
Relative Payment in to Node A from Node C is 0.75
Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0
Total payments in to Node A is 3.993827166915566 in round 17.
Total dollar payment (i.e. liabilities) by Node A (i.e. p_1) is
6.993827166915565
Equity Vector for round 17 and Node A
Equity Vector for round 17 and Node A updated with value 0.0 i.e. total cash
flow 6.993827166915565 minus total payments out (liabilities)
6.993827166915565.

Node B

Total operating cash flow (exogenous assets) 0.0.
Relative Payment in to Node B from Node A is 0.181818181818182
Total dollar payment (i.e. liabilities) by Node A (i.e. p_1) is
6.993827166915565
Relative Payment in to Node B from Node C is 0.25
Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0
Total payments in to Node B is 2.271604939439194 in round 17.
Total dollar payment (i.e. liabilities) by Node B (i.e. p_2) is
2.271604939439194
Equity Vector for round 17 and Node B
Equity Vector for round 17 and Node B updated with value 0.0 i.e. total cash
flow 2.271604939439194 minus total payments out (liabilities)
2.271604939439194.

Node C

Total operating cash flow (exogenous assets) 4.0.
Relative Payment in to Node C from Node A is 0.8181818181818182
Total dollar payment (i.e. liabilities) by Node A (i.e. p_1) is
6.993827166915565
Relative Payment in to Node C from Node B is 0.5625
Total dollar payment (i.e. liabilities) by Node B (i.e. p_2) is
2.2716049529498648
Total payments in to Node C is 7.000000013510672 in round 17.
Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0
Equity Vector for round 17 and Node C
Equity Vector for round 17 and Node C updated with value 7.000000013510672 i.e.

total cash flow 11.000000013510672 minus total payments out (liabilities) 4.0.

EQUITY FOR EACH NODE - round 17

Equity for Node A: 0.0
Equity for Node B: 0.0
Equity for Node C: 7.000000013510672
[0.0, 0.0, 7.000000013510672]

ROUND 17 DEFAULTERS

Node A has defaulted in round 17
{'A': True, 'B': True, 'C': False}
The payment vectors for the previous round and current round (i.e. round 17) are
not identical, algorithm will proceed for another round.

END OF ROUND 17

START OF ROUND 18

TOTAL OBLIGATION VECTOR - round 18

i.e. total nominal obligations for each node i.e. p_bar_i...
Total nominal obligation for Node A (i.e. p_bar_1): 11.0
Total nominal obligation for Node B (i.e. p_bar_2): 16.0
Total nominal obligation for Node C (i.e. p_bar_3): 4.0

TOTAL PAYMENT MADE PER NODE - round 18

i.e. min[nominal obligations, cashflow (payments in + exogenous cash flow)] for
each node...

Node A

- Total payments in for Node A

Relative Payment in to Node A from Node B is 0.4375
Total dollar payment (i.e. liabilities) by Node B (i.e. p_2) is
2.271604939439194
Relative Payment in to Node A from Node C is 0.75
Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0
Total payments in to Node A is 3.9938271610046474 in round 18.

- Liabilities for Node A

Liability of Node A to Node B (i.e. P_{01}) is 2.0
Liability of Node A to Node C (i.e. P_{02}) is 9.0
Total nominal liabilities for Node A (i.e. p_{bar_1}) is 11.0

Payment out is $\min[\text{payment out, total cash flow}]$ i.e. $\min[11.0,$
6.993827161004647]

Relative Payment in to Node A from Node B is 0.4375
Total dollar payment (i.e. liabilities) by Node B (i.e. p_2) is
2.271604939439194
Relative Payment in to Node A from Node C is 0.75
Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0
Total payments in to Node A is 3.9938271610046474 in round 18.
Relative Payment in to Node A from Node B is 0.4375
Total dollar payment (i.e. liabilities) by Node B (i.e. p_2) is
2.271604939439194
Relative Payment in to Node A from Node C is 0.75
Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0
Total payments in to Node A is 3.9938271610046474 in round 18.
Relative Payment in to Node A from Node B is 0.4375
Total dollar payment (i.e. liabilities) by Node B (i.e. p_2) is
2.271604939439194
Relative Payment in to Node A from Node C is 0.75
Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0
Total payments in to Node A is 3.9938271610046474 in round 18.
Round 18 and Node A has defaulted due to nominal obligations 11.0 being greater
than cash flow 6.993827161004647. Default loss for Node A is 0.0

- Total Dollar Payment Vector for round 18 and Node A

Total Dollar Payment Vector for round 18 and Node A updated with value
6.993827161004647

Node B

- Total payments in for Node B

Relative Payment in to Node B from Node A is 0.181818181818182
Total dollar payment (i.e. liabilities) by Node A (i.e. p_1) is
6.993827166915565
Relative Payment in to Node B from Node C is 0.25
Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0
Total payments in to Node B is 2.271604939439194 in round 18.

- Liabilities for Node B

Liability of Node B to Node A (i.e. P_{10}) is 7.0

Liability of Node B to Node C (i.e. P_{12}) is 9.0

Total nominal liabilities for Node B (i.e. p_{bar_2}) is 16.0

Payment out is $\min[\text{payment out, total cash flow}]$ i.e. $\min[16.0, 2.271604939439194]$

Relative Payment in to Node B from Node A is 0.18181818181818182

Total dollar payment (i.e. liabilities) by Node A (i.e. p_1) is 6.993827166915565

Relative Payment in to Node B from Node C is 0.25

Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0

Total payments in to Node B is 2.271604939439194 in round 18.

Relative Payment in to Node B from Node A is 0.18181818181818182

Total dollar payment (i.e. liabilities) by Node A (i.e. p_1) is 6.993827166915565

Relative Payment in to Node B from Node C is 0.25

Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0

Total payments in to Node B is 2.271604939439194 in round 18.

Relative Payment in to Node B from Node A is 0.18181818181818182

Total dollar payment (i.e. liabilities) by Node A (i.e. p_1) is 6.993827166915565

Relative Payment in to Node B from Node C is 0.25

Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0

Total payments in to Node B is 2.271604939439194 in round 18.

Round 18 and Node B has defaulted due to nominal obligations 16.0 being greater than cash flow 2.271604939439194. Default loss for Node B is 0.0

- Total Dollar Payment Vector for round 18 and Node B

Total Dollar Payment Vector for round 18 and Node B updated with value 2.271604939439194

Node C

- Total payments in for Node C

Relative Payment in to Node C from Node A is 0.8181818181818182

Total dollar payment (i.e. liabilities) by Node A (i.e. p_1) is 6.993827166915565

Relative Payment in to Node C from Node B is 0.5625

Total dollar payment (i.e. liabilities) by Node B (i.e. p_2) is 2.271604939439194

Total payments in to Node C is 7.000000005910919 in round 18.

- Liabilities for Node C

Liability of Node C to Node A (i.e. P_{20}) is 3.0

Liability of Node C to Node B (i.e. P_{21}) is 1.0

Total nominal liabilities for Node C (i.e. p_{bar_3}) is 4.0

Payment out is min[payment out, total cash flow] i.e. min[4.0,
11.00000000591092]

- Total Dollar Payment Vector for round 18 and Node C
Total Dollar Payment Vector for round 18 and Node C updated with value 4.0

TOTAL PAYMENT VECTOR - round 18

Total payment by Node A (i.e. p_1): 6.993827161004647
Total payment by Node B (i.e. p_2): 2.271604939439194
Total payment by Node C (i.e. p_3): 4.0
[6.993827161004647, 2.271604939439194, 4.0]

UPDATE EQUITY (i.e. BOOK VALUE) FOR EACH NODE - round 18

Node A

Total operating cash flow (exogenous assets) 3.0.
Relative Payment in to Node A from Node B is 0.4375
Total dollar payment (i.e. liabilities) by Node B (i.e. p_2) is
2.271604939439194
Relative Payment in to Node A from Node C is 0.75
Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0
Total payments in to Node A is 3.9938271610046474 in round 18.
Total dollar payment (i.e. liabilities) by Node A (i.e. p_1) is
6.993827161004647
Equity Vector for round 18 and Node A
Equity Vector for round 18 and Node A updated with value 0.0 i.e. total cash
flow 6.993827161004647 minus total payments out (liabilities)
6.993827161004647.

Node B

Total operating cash flow (exogenous assets) 0.0.
Relative Payment in to Node B from Node A is 0.181818181818182
Total dollar payment (i.e. liabilities) by Node A (i.e. p_1) is
6.993827166915565
Relative Payment in to Node B from Node C is 0.25
Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0
Total payments in to Node B is 2.271604939439194 in round 18.
Total dollar payment (i.e. liabilities) by Node B (i.e. p_2) is
2.271604939439194
Equity Vector for round 18 and Node B
Equity Vector for round 18 and Node B updated with value 0.0 i.e. total cash
flow 2.271604939439194 minus total payments out (liabilities)

2.271604939439194.

Node C

Total operating cash flow (exogenous assets) 4.0.

Relative Payment in to Node C from Node A is 0.8181818181818182

Total dollar payment (i.e. liabilities) by Node A (i.e. p_1) is
6.993827166915565

Relative Payment in to Node C from Node B is 0.5625

Total dollar payment (i.e. liabilities) by Node B (i.e. p_2) is
2.271604939439194

Total payments in to Node C is 7.000000005910919 in round 18.

Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0

Equity Vector for round 18 and Node C

Equity Vector for round 18 and Node C updated with value 7.00000000591092 i.e.
total cash flow 11.00000000591092 minus total payments out (liabilities) 4.0.

EQUITY FOR EACH NODE - round 18

Equity for Node A: 0.0

Equity for Node B: 0.0

Equity for Node C: 7.00000000591092

[0.0, 0.0, 7.00000000591092]

ROUND 18 DEFAULTERS

Node A has defaulted in round 18

{'A': True, 'B': True, 'C': False}

The payment vectors for the previous round and current round (i.e. round 18) are
not identical, algorithm will proceed for another round.

END OF ROUND 18

START OF ROUND 19

TOTAL OBLIGATION VECTOR - round 19

i.e. total nominal obligations for each node i.e. p_bar_i...

Total nominal obligation for Node A (i.e. $p_{\bar{1}}$): 11.0
Total nominal obligation for Node B (i.e. $p_{\bar{2}}$): 16.0
Total nominal obligation for Node C (i.e. $p_{\bar{3}}$): 4.0

TOTAL PAYMENT MADE PER NODE - round 19

i.e. $\min[\text{nominal obligations, cashflow (payments in + exogenous cash flow)}]$ for each node...

Node A

- Total payments in for Node A

Relative Payment in to Node A from Node B is 0.4375

Total dollar payment (i.e. liabilities) by Node B (i.e. p_2) is
2.271604939439194

Relative Payment in to Node A from Node C is 0.75

Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0

Total payments in to Node A is 3.9938271610046474 in round 19.

- Liabilities for Node A

Liability of Node A to Node B (i.e. P_{01}) is 2.0

Liability of Node A to Node C (i.e. P_{02}) is 9.0

Total nominal liabilities for Node A (i.e. $p_{\bar{1}}$) is 11.0

Payment out is $\min[\text{payment out, total cash flow}]$ i.e. $\min[11.0, 6.993827161004647]$

Relative Payment in to Node A from Node B is 0.4375

Total dollar payment (i.e. liabilities) by Node B (i.e. p_2) is
2.271604939439194

Relative Payment in to Node A from Node C is 0.75

Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0

Total payments in to Node A is 3.9938271610046474 in round 19.

Relative Payment in to Node A from Node B is 0.4375

Total dollar payment (i.e. liabilities) by Node B (i.e. p_2) is
2.271604939439194

Relative Payment in to Node A from Node C is 0.75

Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0

Total payments in to Node A is 3.9938271610046474 in round 19.

Relative Payment in to Node A from Node B is 0.4375

Total dollar payment (i.e. liabilities) by Node B (i.e. p_2) is
2.271604939439194

Relative Payment in to Node A from Node C is 0.75

Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0

Total payments in to Node A is 3.9938271610046474 in round 19.

Round 19 and Node A has defaulted due to nominal obligations 11.0 being greater than cash flow 6.993827161004647. Default loss for Node A is 0.0

- Total Dollar Payment Vector for round 19 and Node A
Total Dollar Payment Vector for round 19 and Node A updated with value
6.993827161004647

Node B

- Total payments in for Node B
Relative Payment in to Node B from Node A is 0.181818181818182
Total dollar payment (i.e. liabilities) by Node A (i.e. p_1) is
6.993827161004647
Relative Payment in to Node B from Node C is 0.25
Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0
Total payments in to Node B is 2.271604938364481 in round 19.

- Liabilities for Node B
Liability of Node B to Node A (i.e. P_10) is 7.0
Liability of Node B to Node C (i.e. P_12) is 9.0
Total nominal liabilities for Node B (i.e. p_bar_2) is 16.0

Payment out is min[payment out, total cash flow] i.e. min[16.0,
2.271604938364481]

Relative Payment in to Node B from Node A is 0.181818181818182
Total dollar payment (i.e. liabilities) by Node A (i.e. p_1) is
6.993827161004647
Relative Payment in to Node B from Node C is 0.25
Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0
Total payments in to Node B is 2.271604938364481 in round 19.
Relative Payment in to Node B from Node A is 0.181818181818182
Total dollar payment (i.e. liabilities) by Node A (i.e. p_1) is
6.993827161004647
Relative Payment in to Node B from Node C is 0.25
Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0
Total payments in to Node B is 2.271604938364481 in round 19.
Relative Payment in to Node B from Node A is 0.181818181818182
Total dollar payment (i.e. liabilities) by Node A (i.e. p_1) is
6.993827161004647

Relative Payment in to Node B from Node C is 0.25
Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0
Total payments in to Node B is 2.271604938364481 in round 19.
Round 19 and Node B has defaulted due to nominal obligations 16.0 being greater
than cash flow 2.271604938364481. Default loss for Node B is 0.0

- Total Dollar Payment Vector for round 19 and Node B
Total Dollar Payment Vector for round 19 and Node B updated with value
2.271604938364481

Node C

- Total payments in for Node C
 Relative Payment in to Node C from Node A is 0.81818181818182
 Total dollar payment (i.e. liabilities) by Node A (i.e. p_1) is
 6.993827161004647
 Relative Payment in to Node C from Node B is 0.5625
 Total dollar payment (i.e. liabilities) by Node B (i.e. p_2) is
 2.271604939439194
 Total payments in to Node C is 7.000000001074713 in round 19.

- Liabilities for Node C
 Liability of Node C to Node A (i.e. P_20) is 3.0
 Liability of Node C to Node B (i.e. P_21) is 1.0
 Total nominal liabilities for Node C (i.e. p_bar_3) is 4.0

Payment out is min[payment out, total cash flow] i.e. min[4.0,
 11.000000001074714]

- Total Dollar Payment Vector for round 19 and Node C
 Total Dollar Payment Vector for round 19 and Node C updated with value 4.0

TOTAL PAYMENT VECTOR - round 19

Total payment by Node A (i.e. p_1): 6.993827161004647
 Total payment by Node B (i.e. p_2): 2.271604938364481
 Total payment by Node C (i.e. p_3): 4.0
 [6.993827161004647, 2.271604938364481, 4.0]

UPDATE EQUITY (i.e. BOOK VALUE) FOR EACH NODE - round 19

Node A
 Total operating cash flow (exogenous assets) 3.0.
 Relative Payment in to Node A from Node B is 0.4375
 Total dollar payment (i.e. liabilities) by Node B (i.e. p_2) is
 2.271604939439194
 Relative Payment in to Node A from Node C is 0.75
 Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0
 Total payments in to Node A is 3.9938271610046474 in round 19.
 Total dollar payment (i.e. liabilities) by Node A (i.e. p_1) is
 6.993827161004647
 Equity Vector for round 19 and Node A
 Equity Vector for round 19 and Node A updated with value 0.0 i.e. total cash
 flow 6.993827161004647 minus total payments out (liabilities)
 6.993827161004647.

Node B

Total operating cash flow (exogenous assets) 0.0.
Relative Payment in to Node B from Node A is 0.181818181818182
Total dollar payment (i.e. liabilities) by Node A (i.e. p_1) is
6.993827161004647
Relative Payment in to Node B from Node C is 0.25
Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0
Total payments in to Node B is 2.271604938364481 in round 19.
Total dollar payment (i.e. liabilities) by Node B (i.e. p_2) is
2.271604938364481
Equity Vector for round 19 and Node B
Equity Vector for round 19 and Node B updated with value 0.0 i.e. total cash
flow 2.271604938364481 minus total payments out (liabilities)
2.271604938364481.

Node C

Total operating cash flow (exogenous assets) 4.0.
Relative Payment in to Node C from Node A is 0.8181818181818182
Total dollar payment (i.e. liabilities) by Node A (i.e. p_1) is
6.993827161004647
Relative Payment in to Node C from Node B is 0.5625
Total dollar payment (i.e. liabilities) by Node B (i.e. p_2) is
2.271604939439194
Total payments in to Node C is 7.000000001074713 in round 19.
Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0
Equity Vector for round 19 and Node C
Equity Vector for round 19 and Node C updated with value 7.000000001074714 i.e.
total cash flow 11.000000001074714 minus total payments out (liabilities) 4.0.

EQUITY FOR EACH NODE - round 19

Equity for Node A: 0.0
Equity for Node B: 0.0
Equity for Node C: 7.000000001074714
[0.0, 0.0, 7.000000001074714]

ROUND 19 DEFAULTERS

Node A has defaulted in round 19
{'A': True, 'B': True, 'C': False}
The payment vectors for the previous round and current round (i.e. round 19) are
not identical, algorithm will proceed for another round.

END OF ROUND 19

START OF ROUND 20

TOTAL OBLIGATION VECTOR - round 20

i.e. total nominal obligations for each node i.e. $p_{\bar{i}}$...
Total nominal obligation for Node A (i.e. $p_{\bar{1}}$): 11.0
Total nominal obligation for Node B (i.e. $p_{\bar{2}}$): 16.0
Total nominal obligation for Node C (i.e. $p_{\bar{3}}$): 4.0

TOTAL PAYMENT MADE PER NODE - round 20

i.e. $\min[\text{nominal obligations, cashflow (payments in + exogenous cash flow)}]$ for each node...

Node A

- Total payments in for Node A
Relative Payment in to Node A from Node B is 0.4375
Total dollar payment (i.e. liabilities) by Node B (i.e. p_2) is 2.271604938364481
Relative Payment in to Node A from Node C is 0.75
Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0
Total payments in to Node A is 3.9938271605344604 in round 20.

- Liabilities for Node A
Liability of Node A to Node B (i.e. P_{01}) is 2.0
Liability of Node A to Node C (i.e. P_{02}) is 9.0
Total nominal liabilities for Node A (i.e. $p_{\bar{1}}$) is 11.0

Payment out is $\min[\text{payment out, total cash flow}]$ i.e. $\min[11.0, 6.99382716053446]$
Relative Payment in to Node A from Node B is 0.4375
Total dollar payment (i.e. liabilities) by Node B (i.e. p_2) is 2.271604938364481
Relative Payment in to Node A from Node C is 0.75
Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0
Total payments in to Node A is 3.9938271605344604 in round 20.

Relative Payment in to Node A from Node B is 0.4375
Total dollar payment (i.e. liabilities) by Node B (i.e. p_2) is
2.271604938364481
Relative Payment in to Node A from Node C is 0.75
Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0
Total payments in to Node A is 3.9938271605344604 in round 20.
Relative Payment in to Node A from Node B is 0.4375
Total dollar payment (i.e. liabilities) by Node B (i.e. p_2) is
2.271604938364481
Relative Payment in to Node A from Node C is 0.75
Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0
Total payments in to Node A is 3.9938271605344604 in round 20.
Round 20 and Node A has defaulted due to nominal obligations 11.0 being greater
than cash flow 6.99382716053446. Default loss for Node A is 0.0

- Total Dollar Payment Vector for round 20 and Node A
Total Dollar Payment Vector for round 20 and Node A updated with value
6.99382716053446

Node B

- Total payments in for Node B
Relative Payment in to Node B from Node A is 0.181818181818182
Total dollar payment (i.e. liabilities) by Node A (i.e. p_1) is
6.993827161004647
Relative Payment in to Node B from Node C is 0.25
Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0
Total payments in to Node B is 2.271604938364481 in round 20.

- Liabilities for Node B
Liability of Node B to Node A (i.e. P_10) is 7.0
Liability of Node B to Node C (i.e. P_12) is 9.0
Total nominal liabilities for Node B (i.e. p_bar_2) is 16.0

Payment out is min[payment out, total cash flow] i.e. min[16.0,
2.271604938364481]
Relative Payment in to Node B from Node A is 0.181818181818182
Total dollar payment (i.e. liabilities) by Node A (i.e. p_1) is
6.993827161004647
Relative Payment in to Node B from Node C is 0.25
Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0
Total payments in to Node B is 2.271604938364481 in round 20.
Relative Payment in to Node B from Node A is 0.181818181818182
Total dollar payment (i.e. liabilities) by Node A (i.e. p_1) is
6.993827161004647
Relative Payment in to Node B from Node C is 0.25
Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0
Total payments in to Node B is 2.271604938364481 in round 20.

Relative Payment in to Node B from Node A is 0.18181818181818182
 Total dollar payment (i.e. liabilities) by Node A (i.e. p_1) is
 6.993827161004647
 Relative Payment in to Node B from Node C is 0.25
 Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0
 Total payments in to Node B is 2.271604938364481 in round 20.
 Round 20 and Node B has defaulted due to nominal obligations 16.0 being greater
 than cash flow 2.271604938364481. Default loss for Node B is 0.0

- Total Dollar Payment Vector for round 20 and Node B
 Total Dollar Payment Vector for round 20 and Node B updated with value
 2.271604938364481

Node C

- Total payments in for Node C
 Relative Payment in to Node C from Node A is 0.8181818181818182
 Total dollar payment (i.e. liabilities) by Node A (i.e. p_1) is
 6.993827161004647
 Relative Payment in to Node C from Node B is 0.5625
 Total dollar payment (i.e. liabilities) by Node B (i.e. p_2) is
 2.271604938364481
 Total payments in to Node C is 7.0000000004701874 in round 20.

- Liabilities for Node C
 Liability of Node C to Node A (i.e. P_20) is 3.0
 Liability of Node C to Node B (i.e. P_21) is 1.0
 Total nominal liabilities for Node C (i.e. p_bar_3) is 4.0

Payment out is min[payment out, total cash flow] i.e. min[4.0,
 11.000000000470187]

- Total Dollar Payment Vector for round 20 and Node C
 Total Dollar Payment Vector for round 20 and Node C updated with value 4.0

 TOTAL PAYMENT VECTOR - round 20

Total payment by Node A (i.e. p_1): 6.99382716053446
 Total payment by Node B (i.e. p_2): 2.271604938364481
 Total payment by Node C (i.e. p_3): 4.0
 [6.99382716053446, 2.271604938364481, 4.0]

 UPDATE EQUITY (i.e. BOOK VALUE) FOR EACH NODE - round 20

Node A

Total operating cash flow (exogenous assets) 3.0.
Relative Payment in to Node A from Node B is 0.4375
Total dollar payment (i.e. liabilities) by Node B (i.e. p_2) is
2.271604938364481
Relative Payment in to Node A from Node C is 0.75
Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0
Total payments in to Node A is 3.9938271605344604 in round 20.
Total dollar payment (i.e. liabilities) by Node A (i.e. p_1) is 6.99382716053446
Equity Vector for round 20 and Node A
Equity Vector for round 20 and Node A updated with value 0.0 i.e. total cash
flow 6.99382716053446 minus total payments out (liabilities) 6.99382716053446.

Node B

Total operating cash flow (exogenous assets) 0.0.
Relative Payment in to Node B from Node A is 0.181818181818182
Total dollar payment (i.e. liabilities) by Node A (i.e. p_1) is
6.993827161004647
Relative Payment in to Node B from Node C is 0.25
Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0
Total payments in to Node B is 2.271604938364481 in round 20.
Total dollar payment (i.e. liabilities) by Node B (i.e. p_2) is
2.271604938364481
Equity Vector for round 20 and Node B
Equity Vector for round 20 and Node B updated with value 0.0 i.e. total cash
flow 2.271604938364481 minus total payments out (liabilities)
2.271604938364481.

Node C

Total operating cash flow (exogenous assets) 4.0.
Relative Payment in to Node C from Node A is 0.81818181818182
Total dollar payment (i.e. liabilities) by Node A (i.e. p_1) is
6.993827161004647
Relative Payment in to Node C from Node B is 0.5625
Total dollar payment (i.e. liabilities) by Node B (i.e. p_2) is
2.271604938364481
Total payments in to Node C is 7.0000000004701874 in round 20.
Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0
Equity Vector for round 20 and Node C
Equity Vector for round 20 and Node C updated with value 7.0000000004701874 i.e.
total cash flow 11.000000000470187 minus total payments out (liabilities) 4.0.

EQUITY FOR EACH NODE - round 20

Equity for Node A: 0.0

Equity for Node B: 0.0
Equity for Node C: 7.0000000004701874
[0.0, 0.0, 7.0000000004701874]

ROUND 20 DEFAULTERS

Node A has defaulted in round 20
{'A': True, 'B': True, 'C': False}
The payment vectors for the previous round and current round (i.e. round 20) are
not identical, algorithm will proceed for another round.

END OF ROUND 20

START OF ROUND 21

TOTAL OBLIGATION VECTOR - round 21

i.e. total nominal obligations for each node i.e. p_bar_i...
Total nominal obligation for Node A (i.e. p_bar_1): 11.0
Total nominal obligation for Node B (i.e. p_bar_2): 16.0
Total nominal obligation for Node C (i.e. p_bar_3): 4.0

TOTAL PAYMENT MADE PER NODE - round 21

i.e. min[nominal obligations, cashflow (payments in + exogenous cash flow)] for
each node...

Node A

- Total payments in for Node A
Relative Payment in to Node A from Node B is 0.4375
Total dollar payment (i.e. liabilities) by Node B (i.e. p_2) is
2.271604938364481
Relative Payment in to Node A from Node C is 0.75
Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0
Total payments in to Node A is 3.9938271605344604 in round 21.

- Liabilities for Node A

Liability of Node A to Node B (i.e. P_01) is 2.0
Liability of Node A to Node C (i.e. P_02) is 9.0
Total nominal liabilities for Node A (i.e. p_bar_1) is 11.0

Payment out is min[payment out, total cash flow] i.e. min[11.0, 6.99382716053446]

Relative Payment in to Node A from Node B is 0.4375
Total dollar payment (i.e. liabilities) by Node B (i.e. p_2) is 2.271604938364481
Relative Payment in to Node A from Node C is 0.75
Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0
Total payments in to Node A is 3.9938271605344604 in round 21.
Relative Payment in to Node A from Node B is 0.4375
Total dollar payment (i.e. liabilities) by Node B (i.e. p_2) is 2.271604938364481
Relative Payment in to Node A from Node C is 0.75
Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0
Total payments in to Node A is 3.9938271605344604 in round 21.
Relative Payment in to Node A from Node B is 0.4375
Total dollar payment (i.e. liabilities) by Node B (i.e. p_2) is 2.271604938364481
Relative Payment in to Node A from Node C is 0.75
Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0
Total payments in to Node A is 3.9938271605344604 in round 21.
Round 21 and Node A has defaulted due to nominal obligations 11.0 being greater than cash flow 6.99382716053446. Default loss for Node A is 0.0

- Total Dollar Payment Vector for round 21 and Node A
Total Dollar Payment Vector for round 21 and Node A updated with value 6.99382716053446

Node B

- Total payments in for Node B
Relative Payment in to Node B from Node A is 0.181818181818182
Total dollar payment (i.e. liabilities) by Node A (i.e. p_1) is 6.99382716053446
Relative Payment in to Node B from Node C is 0.25
Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0
Total payments in to Node B is 2.2716049382789927 in round 21.

- Liabilities for Node B
Liability of Node B to Node A (i.e. P_10) is 7.0
Liability of Node B to Node C (i.e. P_12) is 9.0
Total nominal liabilities for Node B (i.e. p_bar_2) is 16.0

Payment out is min[payment out, total cash flow] i.e. min[16.0, 2.2716049382789927]
Relative Payment in to Node B from Node A is 0.181818181818182

Total dollar payment (i.e. liabilities) by Node A (i.e. p_1) is 6.99382716053446
 Relative Payment in to Node B from Node C is 0.25
 Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0
 Total payments in to Node B is 2.2716049382789927 in round 21.
 Relative Payment in to Node B from Node A is 0.181818181818182
 Total dollar payment (i.e. liabilities) by Node A (i.e. p_1) is 6.99382716053446
 Relative Payment in to Node B from Node C is 0.25
 Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0
 Total payments in to Node B is 2.2716049382789927 in round 21.
 Relative Payment in to Node B from Node A is 0.181818181818182
 Total dollar payment (i.e. liabilities) by Node A (i.e. p_1) is 6.99382716053446
 Relative Payment in to Node B from Node C is 0.25
 Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0
 Total payments in to Node B is 2.2716049382789927 in round 21.
 Round 21 and Node B has defaulted due to nominal obligations 16.0 being greater
 than cash flow 2.2716049382789927. Default loss for Node B is 0.0

- Total Dollar Payment Vector for round 21 and Node B
 Total Dollar Payment Vector for round 21 and Node B updated with value
 2.2716049382789927

Node C

- Total payments in for Node C
 Relative Payment in to Node C from Node A is 0.8181818181818182
 Total dollar payment (i.e. liabilities) by Node A (i.e. p_1) is 6.99382716053446
 Relative Payment in to Node C from Node B is 0.5625
 Total dollar payment (i.e. liabilities) by Node B (i.e. p_2) is
 2.271604938364481
 Total payments in to Node C is 7.000000000085489 in round 21.

- Liabilities for Node C
 Liability of Node C to Node A (i.e. P_20) is 3.0
 Liability of Node C to Node B (i.e. P_21) is 1.0
 Total nominal liabilities for Node C (i.e. p_bar_3) is 4.0

Payment out is min[payment out, total cash flow] i.e. min[4.0,
 11.000000000085489]

- Total Dollar Payment Vector for round 21 and Node C
 Total Dollar Payment Vector for round 21 and Node C updated with value 4.0

TOTAL PAYMENT VECTOR - round 21

Total payment by Node A (i.e. p_1): 6.99382716053446
 Total payment by Node B (i.e. p_2): 2.2716049382789927

Total payment by Node C (i.e. p_3): 4.0
[6.99382716053446, 2.2716049382789927, 4.0]

UPDATE EQUITY (i.e. BOOK VALUE) FOR EACH NODE - round 21

Node A

Total operating cash flow (exogenous assets) 3.0.
Relative Payment in to Node A from Node B is 0.4375
Total dollar payment (i.e. liabilities) by Node B (i.e. p_2) is
2.271604938364481
Relative Payment in to Node A from Node C is 0.75
Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0
Total payments in to Node A is 3.9938271605344604 in round 21.
Total dollar payment (i.e. liabilities) by Node A (i.e. p_1) is 6.99382716053446
Equity Vector for round 21 and Node A
Equity Vector for round 21 and Node A updated with value 0.0 i.e. total cash
flow 6.99382716053446 minus total payments out (liabilities) 6.99382716053446.

Node B

Total operating cash flow (exogenous assets) 0.0.
Relative Payment in to Node B from Node A is 0.181818181818182
Total dollar payment (i.e. liabilities) by Node A (i.e. p_1) is 6.99382716053446
Relative Payment in to Node B from Node C is 0.25
Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0
Total payments in to Node B is 2.2716049382789927 in round 21.
Total dollar payment (i.e. liabilities) by Node B (i.e. p_2) is
2.2716049382789927
Equity Vector for round 21 and Node B
Equity Vector for round 21 and Node B updated with value 0.0 i.e. total cash
flow 2.2716049382789927 minus total payments out (liabilities)
2.2716049382789927.

Node C

Total operating cash flow (exogenous assets) 4.0.
Relative Payment in to Node C from Node A is 0.8181818181818182
Total dollar payment (i.e. liabilities) by Node A (i.e. p_1) is 6.99382716053446
Relative Payment in to Node C from Node B is 0.5625
Total dollar payment (i.e. liabilities) by Node B (i.e. p_2) is
2.271604938364481
Total payments in to Node C is 7.000000000085489 in round 21.
Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0
Equity Vector for round 21 and Node C
Equity Vector for round 21 and Node C updated with value 7.000000000085489 i.e.
total cash flow 11.000000000085489 minus total payments out (liabilities) 4.0.

EQUITY FOR EACH NODE - round 21

Equity for Node A: 0.0
Equity for Node B: 0.0
Equity for Node C: 7.000000000085489
[0.0, 0.0, 7.000000000085489]

ROUND 21 DEFAULTERS

Node A has defaulted in round 21
{'A': True, 'B': True, 'C': False}
The payment vectors for the previous round and current round (i.e. round 21) are
not identical, algorithm will proceed for another round.

END OF ROUND 21

START OF ROUND 22

TOTAL OBLIGATION VECTOR - round 22

i.e. total nominal obligations for each node i.e. p_bar_i...
Total nominal obligation for Node A (i.e. p_bar_1): 11.0
Total nominal obligation for Node B (i.e. p_bar_2): 16.0
Total nominal obligation for Node C (i.e. p_bar_3): 4.0

TOTAL PAYMENT MADE PER NODE - round 22

i.e. min[nominal obligations, cashflow (payments in + exogenous cash flow)] for
each node...

Node A

- Total payments in for Node A
Relative Payment in to Node A from Node B is 0.4375
Total dollar payment (i.e. liabilities) by Node B (i.e. p_2) is
2.2716049382789927

Relative Payment in to Node A from Node C is 0.75
Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0
Total payments in to Node A is 3.993827160497059 in round 22.

- Liabilities for Node A

Liability of Node A to Node B (i.e. P_{01}) is 2.0
Liability of Node A to Node C (i.e. P_{02}) is 9.0
Total nominal liabilities for Node A (i.e. p_{bar}_1) is 11.0

Payment out is $\min[\text{payment out}, \text{total cash flow}]$ i.e. $\min[11.0, 6.993827160497059]$

Relative Payment in to Node A from Node B is 0.4375
Total dollar payment (i.e. liabilities) by Node B (i.e. p_2) is 2.2716049382789927

Relative Payment in to Node A from Node C is 0.75
Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0
Total payments in to Node A is 3.993827160497059 in round 22.

Relative Payment in to Node A from Node B is 0.4375
Total dollar payment (i.e. liabilities) by Node B (i.e. p_2) is 2.2716049382789927

Relative Payment in to Node A from Node C is 0.75
Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0
Total payments in to Node A is 3.993827160497059 in round 22.

Relative Payment in to Node A from Node B is 0.4375
Total dollar payment (i.e. liabilities) by Node B (i.e. p_2) is 2.2716049382789927

Relative Payment in to Node A from Node C is 0.75
Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0
Total payments in to Node A is 3.993827160497059 in round 22.

Round 22 and Node A has defaulted due to nominal obligations 11.0 being greater than cash flow 6.993827160497059. Default loss for Node A is 0.0

- Total Dollar Payment Vector for round 22 and Node A

Total Dollar Payment Vector for round 22 and Node A updated with value 6.993827160497059

Node B

- Total payments in for Node B

Relative Payment in to Node B from Node A is 0.181818181818182
Total dollar payment (i.e. liabilities) by Node A (i.e. p_1) is 6.99382716053446
Relative Payment in to Node B from Node C is 0.25
Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0
Total payments in to Node B is 2.2716049382789927 in round 22.

- Liabilities for Node B

Liability of Node B to Node A (i.e. P_{10}) is 7.0
Liability of Node B to Node C (i.e. P_{12}) is 9.0

Total nominal liabilities for Node B (i.e. $p_{\bar{2}}$) is 16.0

Payment out is $\min[\text{payment out}, \text{total cash flow}]$ i.e. $\min[16.0, 2.2716049382789927]$

Relative Payment in to Node B from Node A is 0.18181818181818182

Total dollar payment (i.e. liabilities) by Node A (i.e. p_1) is 6.99382716053446

Relative Payment in to Node B from Node C is 0.25

Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0

Total payments in to Node B is 2.2716049382789927 in round 22.

Relative Payment in to Node B from Node A is 0.18181818181818182

Total dollar payment (i.e. liabilities) by Node A (i.e. p_1) is 6.99382716053446

Relative Payment in to Node B from Node C is 0.25

Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0

Total payments in to Node B is 2.2716049382789927 in round 22.

Relative Payment in to Node B from Node A is 0.18181818181818182

Total dollar payment (i.e. liabilities) by Node A (i.e. p_1) is 6.99382716053446

Relative Payment in to Node B from Node C is 0.25

Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0

Total payments in to Node B is 2.2716049382789927 in round 22.

Round 22 and Node B has defaulted due to nominal obligations 16.0 being greater than cash flow 2.2716049382789927. Default loss for Node B is 0.0

- Total Dollar Payment Vector for round 22 and Node B

Total Dollar Payment Vector for round 22 and Node B updated with value 2.2716049382789927

Node C

- Total payments in for Node C

Relative Payment in to Node C from Node A is 0.8181818181818182

Total dollar payment (i.e. liabilities) by Node A (i.e. p_1) is 6.99382716053446

Relative Payment in to Node C from Node B is 0.5625

Total dollar payment (i.e. liabilities) by Node B (i.e. p_2) is

2.2716049382789927

Total payments in to Node C is 7.000000000037401 in round 22.

- Liabilities for Node C

Liability of Node C to Node A (i.e. P_{20}) is 3.0

Liability of Node C to Node B (i.e. P_{21}) is 1.0

Total nominal liabilities for Node C (i.e. $p_{\bar{3}}$) is 4.0

Payment out is $\min[\text{payment out}, \text{total cash flow}]$ i.e. $\min[4.0, 11.000000000037401]$

- Total Dollar Payment Vector for round 22 and Node C

Total Dollar Payment Vector for round 22 and Node C updated with value 4.0

TOTAL PAYMENT VECTOR - round 22

Total payment by Node A (i.e. p_1): 6.993827160497059
Total payment by Node B (i.e. p_2): 2.2716049382789927
Total payment by Node C (i.e. p_3): 4.0
[6.993827160497059, 2.2716049382789927, 4.0]

UPDATE EQUITY (i.e. BOOK VALUE) FOR EACH NODE - round 22

Node A

Total operating cash flow (exogenous assets) 3.0.
Relative Payment in to Node A from Node B is 0.4375
Total dollar payment (i.e. liabilities) by Node B (i.e. p_2) is
2.2716049382789927
Relative Payment in to Node A from Node C is 0.75
Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0
Total payments in to Node A is 3.993827160497059 in round 22.
Total dollar payment (i.e. liabilities) by Node A (i.e. p_1) is
6.993827160497059
Equity Vector for round 22 and Node A
Equity Vector for round 22 and Node A updated with value 0.0 i.e. total cash
flow 6.993827160497059 minus total payments out (liabilities)
6.993827160497059.

Node B

Total operating cash flow (exogenous assets) 0.0.
Relative Payment in to Node B from Node A is 0.181818181818182
Total dollar payment (i.e. liabilities) by Node A (i.e. p_1) is 6.99382716053446
Relative Payment in to Node B from Node C is 0.25
Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0
Total payments in to Node B is 2.2716049382789927 in round 22.
Total dollar payment (i.e. liabilities) by Node B (i.e. p_2) is
2.2716049382789927
Equity Vector for round 22 and Node B
Equity Vector for round 22 and Node B updated with value 0.0 i.e. total cash
flow 2.2716049382789927 minus total payments out (liabilities)
2.2716049382789927.

Node C

Total operating cash flow (exogenous assets) 4.0.
Relative Payment in to Node C from Node A is 0.8181818181818182
Total dollar payment (i.e. liabilities) by Node A (i.e. p_1) is 6.99382716053446
Relative Payment in to Node C from Node B is 0.5625
Total dollar payment (i.e. liabilities) by Node B (i.e. p_2) is
2.2716049382789927

Total payments in to Node C is 7.000000000037401 in round 22.
Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0
Equity Vector for round 22 and Node C
Equity Vector for round 22 and Node C updated with value 7.000000000037401 i.e.
total cash flow 11.000000000037401 minus total payments out (liabilities) 4.0.

EQUITY FOR EACH NODE - round 22

Equity for Node A: 0.0
Equity for Node B: 0.0
Equity for Node C: 7.000000000037401
[0.0, 0.0, 7.000000000037401]

ROUND 22 DEFAULTERS

Node A has defaulted in round 22
{'A': True, 'B': True, 'C': False}
The payment vectors for the previous round and current round (i.e. round 22) are
not identical, algorithm will proceed for another round.

END OF ROUND 22

START OF ROUND 23

TOTAL OBLIGATION VECTOR - round 23

i.e. total nominal obligations for each node i.e. p_bar_i...
Total nominal obligation for Node A (i.e. p_bar_1): 11.0
Total nominal obligation for Node B (i.e. p_bar_2): 16.0
Total nominal obligation for Node C (i.e. p_bar_3): 4.0

TOTAL PAYMENT MADE PER NODE - round 23

i.e. min[nominal obligations, cashflow (payments in + exogenous cash flow)] for
each node...

Node A

- Total payments in for Node A

Relative Payment in to Node A from Node B is 0.4375

Total dollar payment (i.e. liabilities) by Node B (i.e. p_2) is
2.2716049382789927

Relative Payment in to Node A from Node C is 0.75

Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0

Total payments in to Node A is 3.993827160497059 in round 23.

- Liabilities for Node A

Liability of Node A to Node B (i.e. P_{01}) is 2.0

Liability of Node A to Node C (i.e. P_{02}) is 9.0

Total nominal liabilities for Node A (i.e. p_{bar_1}) is 11.0

Payment out is $\min[\text{payment out, total cash flow}]$ i.e. $\min[11.0, 6.993827160497059]$

Relative Payment in to Node A from Node B is 0.4375

Total dollar payment (i.e. liabilities) by Node B (i.e. p_2) is
2.2716049382789927

Relative Payment in to Node A from Node C is 0.75

Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0

Total payments in to Node A is 3.993827160497059 in round 23.

Relative Payment in to Node A from Node B is 0.4375

Total dollar payment (i.e. liabilities) by Node B (i.e. p_2) is
2.2716049382789927

Relative Payment in to Node A from Node C is 0.75

Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0

Total payments in to Node A is 3.993827160497059 in round 23.

Relative Payment in to Node A from Node B is 0.4375

Total dollar payment (i.e. liabilities) by Node B (i.e. p_2) is
2.2716049382789927

Relative Payment in to Node A from Node C is 0.75

Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0

Total payments in to Node A is 3.993827160497059 in round 23.

Round 23 and Node A has defaulted due to nominal obligations 11.0 being greater than cash flow 6.993827160497059. Default loss for Node A is 0.0

- Total Dollar Payment Vector for round 23 and Node A

Total Dollar Payment Vector for round 23 and Node A updated with value
6.993827160497059

Node B

- Total payments in for Node B

Relative Payment in to Node B from Node A is 0.18181818181818182

Total dollar payment (i.e. liabilities) by Node A (i.e. p_1) is

6.993827160497059

Relative Payment in to Node B from Node C is 0.25

Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0

Total payments in to Node B is 2.2716049382721923 in round 23.

- Liabilities for Node B

Liability of Node B to Node A (i.e. P_{10}) is 7.0

Liability of Node B to Node C (i.e. P_{12}) is 9.0

Total nominal liabilities for Node B (i.e. p_{bar_2}) is 16.0

Payment out is $\min[\text{payment out, total cash flow}]$ i.e. $\min[16.0, 2.2716049382721923]$

Relative Payment in to Node B from Node A is 0.18181818181818182

Total dollar payment (i.e. liabilities) by Node A (i.e. p_1) is

6.993827160497059

Relative Payment in to Node B from Node C is 0.25

Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0

Total payments in to Node B is 2.2716049382721923 in round 23.

Relative Payment in to Node B from Node A is 0.18181818181818182

Total dollar payment (i.e. liabilities) by Node A (i.e. p_1) is

6.993827160497059

Relative Payment in to Node B from Node C is 0.25

Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0

Total payments in to Node B is 2.2716049382721923 in round 23.

Relative Payment in to Node B from Node A is 0.18181818181818182

Total dollar payment (i.e. liabilities) by Node A (i.e. p_1) is

6.993827160497059

Relative Payment in to Node B from Node C is 0.25

Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0

Total payments in to Node B is 2.2716049382721923 in round 23.

Round 23 and Node B has defaulted due to nominal obligations 16.0 being greater than cash flow 2.2716049382721923. Default loss for Node B is 0.0

- Total Dollar Payment Vector for round 23 and Node B

Total Dollar Payment Vector for round 23 and Node B updated with value

2.2716049382721923

Node C

- Total payments in for Node C

Relative Payment in to Node C from Node A is 0.8181818181818182

Total dollar payment (i.e. liabilities) by Node A (i.e. p_1) is

6.993827160497059

Relative Payment in to Node C from Node B is 0.5625

Total dollar payment (i.e. liabilities) by Node B (i.e. p_2) is

2.2716049382789927

Total payments in to Node C is 7.00000000000068 in round 23.

- Liabilities for Node C

Liability of Node C to Node A (i.e. P_{20}) is 3.0

Liability of Node C to Node B (i.e. P_{21}) is 1.0

Total nominal liabilities for Node C (i.e. p_{bar_3}) is 4.0

Payment out is $\min[\text{payment out}, \text{total cash flow}]$ i.e. $\min[4.0, 11.00000000000068]$

- Total Dollar Payment Vector for round 23 and Node C

Total Dollar Payment Vector for round 23 and Node C updated with value 4.0

TOTAL PAYMENT VECTOR - round 23

Total payment by Node A (i.e. p_1): 6.993827160497059

Total payment by Node B (i.e. p_2): 2.2716049382721923

Total payment by Node C (i.e. p_3): 4.0

[6.993827160497059, 2.2716049382721923, 4.0]

UPDATE EQUITY (i.e. BOOK VALUE) FOR EACH NODE - round 23

Node A

Total operating cash flow (exogenous assets) 3.0.

Relative Payment in to Node A from Node B is 0.4375

Total dollar payment (i.e. liabilities) by Node B (i.e. p_2) is
2.2716049382789927

Relative Payment in to Node A from Node C is 0.75

Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0

Total payments in to Node A is 3.993827160497059 in round 23.

Total dollar payment (i.e. liabilities) by Node A (i.e. p_1) is
6.993827160497059

Equity Vector for round 23 and Node A

Equity Vector for round 23 and Node A updated with value 0.0 i.e. total cash
flow 6.993827160497059 minus total payments out (liabilities)
6.993827160497059.

Node B

Total operating cash flow (exogenous assets) 0.0.

Relative Payment in to Node B from Node A is 0.18181818181818182

Total dollar payment (i.e. liabilities) by Node A (i.e. p_1) is
6.993827160497059

Relative Payment in to Node B from Node C is 0.25

Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0

Total payments in to Node B is 2.2716049382721923 in round 23.

Total dollar payment (i.e. liabilities) by Node B (i.e. p_2) is
2.2716049382721923

Equity Vector for round 23 and Node B
Equity Vector for round 23 and Node B updated with value 0.0 i.e. total cash
flow 2.2716049382721923 minus total payments out (liabilities)
2.2716049382721923.

Node C

Total operating cash flow (exogenous assets) 4.0.
Relative Payment in to Node C from Node A is 0.8181818181818182
Total dollar payment (i.e. liabilities) by Node A (i.e. p_1) is
6.993827160497059
Relative Payment in to Node C from Node B is 0.5625
Total dollar payment (i.e. liabilities) by Node B (i.e. p_2) is
2.2716049382789927
Total payments in to Node C is 7.00000000000068 in round 23.
Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0
Equity Vector for round 23 and Node C
Equity Vector for round 23 and Node C updated with value 7.00000000000068 i.e.
total cash flow 11.00000000000068 minus total payments out (liabilities) 4.0.

EQUITY FOR EACH NODE - round 23

Equity for Node A: 0.0
Equity for Node B: 0.0
Equity for Node C: 7.00000000000068
[0.0, 0.0, 7.00000000000068]

ROUND 23 DEFAULTERS

Node A has defaulted in round 23
{'A': True, 'B': True, 'C': False}
The payment vectors for the previous round and current round (i.e. round 23) are
not identical, algorithm will proceed for another round.

END OF ROUND 23

START OF ROUND 24

TOTAL OBLIGATION VECTOR - round 24

i.e. total nominal obligations for each node i.e. p_{bar_i} ...
Total nominal obligation for Node A (i.e. p_{bar_1}): 11.0
Total nominal obligation for Node B (i.e. p_{bar_2}): 16.0
Total nominal obligation for Node C (i.e. p_{bar_3}): 4.0

TOTAL PAYMENT MADE PER NODE - round 24

i.e. $\min[\text{nominal obligations, cashflow (payments in + exogenous cash flow)}]$ for each node...

Node A

- Total payments in for Node A
Relative Payment in to Node A from Node B is 0.4375
Total dollar payment (i.e. liabilities) by Node B (i.e. p_2) is 2.2716049382721923
Relative Payment in to Node A from Node C is 0.75
Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0
Total payments in to Node A is 3.9938271604940843 in round 24.

- Liabilities for Node A
Liability of Node A to Node B (i.e. P_{01}) is 2.0
Liability of Node A to Node C (i.e. P_{02}) is 9.0
Total nominal liabilities for Node A (i.e. p_{bar_1}) is 11.0

Payment out is $\min[\text{payment out, total cash flow}]$ i.e. $\min[11.0, 6.993827160494084]$
Relative Payment in to Node A from Node B is 0.4375
Total dollar payment (i.e. liabilities) by Node B (i.e. p_2) is 2.2716049382721923
Relative Payment in to Node A from Node C is 0.75
Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0
Total payments in to Node A is 3.9938271604940843 in round 24.
Relative Payment in to Node A from Node B is 0.4375
Total dollar payment (i.e. liabilities) by Node B (i.e. p_2) is 2.2716049382721923
Relative Payment in to Node A from Node C is 0.75
Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0
Total payments in to Node A is 3.9938271604940843 in round 24.
Relative Payment in to Node A from Node B is 0.4375
Total dollar payment (i.e. liabilities) by Node B (i.e. p_2) is 2.2716049382721923
Relative Payment in to Node A from Node C is 0.75
Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0

Total payments in to Node A is 3.9938271604940843 in round 24.
Round 24 and Node A has defaulted due to nominal obligations 11.0 being greater than cash flow 6.993827160494084. Default loss for Node A is 0.0

- Total Dollar Payment Vector for round 24 and Node A
Total Dollar Payment Vector for round 24 and Node A updated with value 6.993827160494084

Node B

- Total payments in for Node B
Relative Payment in to Node B from Node A is 0.181818181818182
Total dollar payment (i.e. liabilities) by Node A (i.e. p_1) is 6.993827160497059
Relative Payment in to Node B from Node C is 0.25
Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0
Total payments in to Node B is 2.2716049382721923 in round 24.

- Liabilities for Node B
Liability of Node B to Node A (i.e. P_10) is 7.0
Liability of Node B to Node C (i.e. P_12) is 9.0
Total nominal liabilities for Node B (i.e. p_bar_2) is 16.0

Payment out is min[payment out, total cash flow] i.e. min[16.0, 2.2716049382721923]

Relative Payment in to Node B from Node A is 0.181818181818182
Total dollar payment (i.e. liabilities) by Node A (i.e. p_1) is 6.993827160497059
Relative Payment in to Node B from Node C is 0.25
Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0
Total payments in to Node B is 2.2716049382721923 in round 24.
Relative Payment in to Node B from Node A is 0.181818181818182
Total dollar payment (i.e. liabilities) by Node A (i.e. p_1) is 6.993827160497059

Relative Payment in to Node B from Node C is 0.25
Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0
Total payments in to Node B is 2.2716049382721923 in round 24.
Relative Payment in to Node B from Node A is 0.181818181818182
Total dollar payment (i.e. liabilities) by Node A (i.e. p_1) is 6.993827160497059

Relative Payment in to Node B from Node C is 0.25
Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0
Total payments in to Node B is 2.2716049382721923 in round 24.
Round 24 and Node B has defaulted due to nominal obligations 16.0 being greater than cash flow 2.2716049382721923. Default loss for Node B is 0.0

- Total Dollar Payment Vector for round 24 and Node B
Total Dollar Payment Vector for round 24 and Node B updated with value

2.2716049382721923

Node C

- Total payments in for Node C

Relative Payment in to Node C from Node A is 0.8181818181818182

Total dollar payment (i.e. liabilities) by Node A (i.e. p_1) is 6.993827160497059

Relative Payment in to Node C from Node B is 0.5625

Total dollar payment (i.e. liabilities) by Node B (i.e. p_2) is 2.2716049382721923

Total payments in to Node C is 7.0000000000029745 in round 24.

- Liabilities for Node C

Liability of Node C to Node A (i.e. P_{20}) is 3.0

Liability of Node C to Node B (i.e. P_{21}) is 1.0

Total nominal liabilities for Node C (i.e. p_{bar_3}) is 4.0

Payment out is $\min[\text{payment out}, \text{total cash flow}]$ i.e. $\min[4.0, 11.000000000002974]$

- Total Dollar Payment Vector for round 24 and Node C

Total Dollar Payment Vector for round 24 and Node C updated with value 4.0

TOTAL PAYMENT VECTOR - round 24

Total payment by Node A (i.e. p_1): 6.993827160494084

Total payment by Node B (i.e. p_2): 2.2716049382721923

Total payment by Node C (i.e. p_3): 4.0

[6.993827160494084, 2.2716049382721923, 4.0]

UPDATE EQUITY (i.e. BOOK VALUE) FOR EACH NODE - round 24

Node A

Total operating cash flow (exogenous assets) 3.0.

Relative Payment in to Node A from Node B is 0.4375

Total dollar payment (i.e. liabilities) by Node B (i.e. p_2) is 2.2716049382721923

Relative Payment in to Node A from Node C is 0.75

Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0

Total payments in to Node A is 3.9938271604940843 in round 24.

Total dollar payment (i.e. liabilities) by Node A (i.e. p_1) is 6.993827160494084

Equity Vector for round 24 and Node A

Equity Vector for round 24 and Node A updated with value 0.0 i.e. total cash flow 6.993827160494084 minus total payments out (liabilities) 6.993827160494084.

Node B

Total operating cash flow (exogenous assets) 0.0.

Relative Payment in to Node B from Node A is 0.181818181818182

Total dollar payment (i.e. liabilities) by Node A (i.e. p_1) is 6.993827160497059

Relative Payment in to Node B from Node C is 0.25

Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0

Total payments in to Node B is 2.2716049382721923 in round 24.

Total dollar payment (i.e. liabilities) by Node B (i.e. p_2) is 2.2716049382721923

Equity Vector for round 24 and Node B

Equity Vector for round 24 and Node B updated with value 0.0 i.e. total cash flow 2.2716049382721923 minus total payments out (liabilities) 2.2716049382721923.

Node C

Total operating cash flow (exogenous assets) 4.0.

Relative Payment in to Node C from Node A is 0.8181818181818182

Total dollar payment (i.e. liabilities) by Node A (i.e. p_1) is 6.993827160497059

Relative Payment in to Node C from Node B is 0.5625

Total dollar payment (i.e. liabilities) by Node B (i.e. p_2) is 2.2716049382721923

Total payments in to Node C is 7.0000000000029745 in round 24.

Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0

Equity Vector for round 24 and Node C

Equity Vector for round 24 and Node C updated with value 7.000000000002974 i.e. total cash flow 11.000000000002974 minus total payments out (liabilities) 4.0.

EQUITY FOR EACH NODE - round 24

Equity for Node A: 0.0

Equity for Node B: 0.0

Equity for Node C: 7.000000000002974

[0.0, 0.0, 7.000000000002974]

ROUND 24 DEFAULTERS

Node A has defaulted in round 24

{'A': True, 'B': True, 'C': False}

The payment vectors for the previous round and current round (i.e. round 24) are not identical, algorithm will proceed for another round.

END OF ROUND 24

START OF ROUND 25

TOTAL OBLIGATION VECTOR - round 25

i.e. total nominal obligations for each node i.e. p_bar_i...
Total nominal obligation for Node A (i.e. p_bar_1): 11.0
Total nominal obligation for Node B (i.e. p_bar_2): 16.0
Total nominal obligation for Node C (i.e. p_bar_3): 4.0

TOTAL PAYMENT MADE PER NODE - round 25

i.e. min[nominal obligations, cashflow (payments in + exogenous cash flow)] for each node...

Node A

- Total payments in for Node A
Relative Payment in to Node A from Node B is 0.4375
Total dollar payment (i.e. liabilities) by Node B (i.e. p_2) is 2.2716049382721923
Relative Payment in to Node A from Node C is 0.75
Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0
Total payments in to Node A is 3.9938271604940843 in round 25.

- Liabilities for Node A
Liability of Node A to Node B (i.e. P_01) is 2.0
Liability of Node A to Node C (i.e. P_02) is 9.0
Total nominal liabilities for Node A (i.e. p_bar_1) is 11.0

Payment out is min[payment out, total cash flow] i.e. min[11.0, 6.993827160494084]
Relative Payment in to Node A from Node B is 0.4375
Total dollar payment (i.e. liabilities) by Node B (i.e. p_2) is 2.2716049382721923

Relative Payment in to Node A from Node C is 0.75
 Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0
 Total payments in to Node A is 3.9938271604940843 in round 25.
 Relative Payment in to Node A from Node B is 0.4375
 Total dollar payment (i.e. liabilities) by Node B (i.e. p_2) is
 2.2716049382721923
 Relative Payment in to Node A from Node C is 0.75
 Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0
 Total payments in to Node A is 3.9938271604940843 in round 25.
 Relative Payment in to Node A from Node B is 0.4375
 Total dollar payment (i.e. liabilities) by Node B (i.e. p_2) is
 2.2716049382721923
 Relative Payment in to Node A from Node C is 0.75
 Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0
 Total payments in to Node A is 3.9938271604940843 in round 25.
 Round 25 and Node A has defaulted due to nominal obligations 11.0 being greater
 than cash flow 6.993827160494084. Default loss for Node A is 0.0

- Total Dollar Payment Vector for round 25 and Node A
 Total Dollar Payment Vector for round 25 and Node A updated with value
 6.993827160494084

Node B

- Total payments in for Node B
 Relative Payment in to Node B from Node A is 0.181818181818182
 Total dollar payment (i.e. liabilities) by Node A (i.e. p_1) is
 6.993827160494084
 Relative Payment in to Node B from Node C is 0.25
 Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0
 Total payments in to Node B is 2.2716049382716514 in round 25.

- Liabilities for Node B
 Liability of Node B to Node A (i.e. P_10) is 7.0
 Liability of Node B to Node C (i.e. P_12) is 9.0
 Total nominal liabilities for Node B (i.e. p_bar_2) is 16.0

Payment out is min[payment out, total cash flow] i.e. min[16.0,
 2.2716049382716514]
 Relative Payment in to Node B from Node A is 0.181818181818182
 Total dollar payment (i.e. liabilities) by Node A (i.e. p_1) is
 6.993827160494084
 Relative Payment in to Node B from Node C is 0.25
 Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0
 Total payments in to Node B is 2.2716049382716514 in round 25.
 Relative Payment in to Node B from Node A is 0.181818181818182
 Total dollar payment (i.e. liabilities) by Node A (i.e. p_1) is
 6.993827160494084

Relative Payment in to Node B from Node C is 0.25
 Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0
 Total payments in to Node B is 2.2716049382716514 in round 25.
 Relative Payment in to Node B from Node A is 0.181818181818182
 Total dollar payment (i.e. liabilities) by Node A (i.e. p_1) is
 6.993827160494084
 Relative Payment in to Node B from Node C is 0.25
 Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0
 Total payments in to Node B is 2.2716049382716514 in round 25.
 Round 25 and Node B has defaulted due to nominal obligations 16.0 being greater
 than cash flow 2.2716049382716514. Default loss for Node B is 0.0

- Total Dollar Payment Vector for round 25 and Node B
 Total Dollar Payment Vector for round 25 and Node B updated with value
 2.2716049382716514

Node C

- Total payments in for Node C
 Relative Payment in to Node C from Node A is 0.8181818181818182
 Total dollar payment (i.e. liabilities) by Node A (i.e. p_1) is
 6.993827160494084
 Relative Payment in to Node C from Node B is 0.5625
 Total dollar payment (i.e. liabilities) by Node B (i.e. p_2) is
 2.2716049382721923
 Total payments in to Node C is 7.0000000000000541 in round 25.

- Liabilities for Node C
 Liability of Node C to Node A (i.e. P_20) is 3.0
 Liability of Node C to Node B (i.e. P_21) is 1.0
 Total nominal liabilities for Node C (i.e. p_bar_3) is 4.0

Payment out is min[payment out, total cash flow] i.e. min[4.0,
 11.000000000000054]

- Total Dollar Payment Vector for round 25 and Node C
 Total Dollar Payment Vector for round 25 and Node C updated with value 4.0

 TOTAL PAYMENT VECTOR - round 25

Total payment by Node A (i.e. p_1): 6.993827160494084
 Total payment by Node B (i.e. p_2): 2.2716049382716514
 Total payment by Node C (i.e. p_3): 4.0
 [6.993827160494084, 2.2716049382716514, 4.0]

UPDATE EQUITY (i.e. BOOK VALUE) FOR EACH NODE - round 25

Node A

Total operating cash flow (exogenous assets) 3.0.

Relative Payment in to Node A from Node B is 0.4375

Total dollar payment (i.e. liabilities) by Node B (i.e. p_2) is
2.2716049382721923

Relative Payment in to Node A from Node C is 0.75

Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0

Total payments in to Node A is 3.9938271604940843 in round 25.

Total dollar payment (i.e. liabilities) by Node A (i.e. p_1) is
6.993827160494084

Equity Vector for round 25 and Node A

Equity Vector for round 25 and Node A updated with value 0.0 i.e. total cash
flow 6.993827160494084 minus total payments out (liabilities)
6.993827160494084.

Node B

Total operating cash flow (exogenous assets) 0.0.

Relative Payment in to Node B from Node A is 0.181818181818182

Total dollar payment (i.e. liabilities) by Node A (i.e. p_1) is
6.993827160494084

Relative Payment in to Node B from Node C is 0.25

Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0

Total payments in to Node B is 2.2716049382716514 in round 25.

Total dollar payment (i.e. liabilities) by Node B (i.e. p_2) is
2.2716049382716514

Equity Vector for round 25 and Node B

Equity Vector for round 25 and Node B updated with value 0.0 i.e. total cash
flow 2.2716049382716514 minus total payments out (liabilities)
2.2716049382716514.

Node C

Total operating cash flow (exogenous assets) 4.0.

Relative Payment in to Node C from Node A is 0.8181818181818182

Total dollar payment (i.e. liabilities) by Node A (i.e. p_1) is
6.993827160494084

Relative Payment in to Node C from Node B is 0.5625

Total dollar payment (i.e. liabilities) by Node B (i.e. p_2) is
2.2716049382721923

Total payments in to Node C is 7.000000000000541 in round 25.

Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0

Equity Vector for round 25 and Node C

Equity Vector for round 25 and Node C updated with value 7.00000000000054 i.e.
total cash flow 11.00000000000054 minus total payments out (liabilities) 4.0.

EQUITY FOR EACH NODE - round 25

Equity for Node A: 0.0
Equity for Node B: 0.0
Equity for Node C: 7.000000000000054
[0.0, 0.0, 7.000000000000054]

ROUND 25 DEFAULTERS

Node A has defaulted in round 25
{'A': True, 'B': True, 'C': False}
The payment vectors for the previous round and current round (i.e. round 25) are
not identical, algorithm will proceed for another round.

END OF ROUND 25

START OF ROUND 26

TOTAL OBLIGATION VECTOR - round 26

i.e. total nominal obligations for each node i.e. p_bar_i...
Total nominal obligation for Node A (i.e. p_bar_1): 11.0
Total nominal obligation for Node B (i.e. p_bar_2): 16.0
Total nominal obligation for Node C (i.e. p_bar_3): 4.0

TOTAL PAYMENT MADE PER NODE - round 26

i.e. min[nominal obligations, cashflow (payments in + exogenous cash flow)] for
each node...

Node A

- Total payments in for Node A
Relative Payment in to Node A from Node B is 0.4375
Total dollar payment (i.e. liabilities) by Node B (i.e. p_2) is
2.2716049382716514

Relative Payment in to Node A from Node C is 0.75
Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0
Total payments in to Node A is 3.9938271604938476 in round 26.

- Liabilities for Node A

Liability of Node A to Node B (i.e. P_{01}) is 2.0
Liability of Node A to Node C (i.e. P_{02}) is 9.0
Total nominal liabilities for Node A (i.e. p_{bar_1}) is 11.0

Payment out is $\min[\text{payment out}, \text{total cash flow}]$ i.e. $\min[11.0, 6.993827160493847]$

Relative Payment in to Node A from Node B is 0.4375
Total dollar payment (i.e. liabilities) by Node B (i.e. p_2) is 2.2716049382716514

Relative Payment in to Node A from Node C is 0.75
Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0
Total payments in to Node A is 3.9938271604938476 in round 26.

Relative Payment in to Node A from Node B is 0.4375
Total dollar payment (i.e. liabilities) by Node B (i.e. p_2) is 2.2716049382716514

Relative Payment in to Node A from Node C is 0.75
Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0
Total payments in to Node A is 3.9938271604938476 in round 26.

Relative Payment in to Node A from Node B is 0.4375
Total dollar payment (i.e. liabilities) by Node B (i.e. p_2) is 2.2716049382716514

Relative Payment in to Node A from Node C is 0.75
Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0
Total payments in to Node A is 3.9938271604938476 in round 26.

Round 26 and Node A has defaulted due to nominal obligations 11.0 being greater than cash flow 6.993827160493847. Default loss for Node A is 0.0

- Total Dollar Payment Vector for round 26 and Node A

Total Dollar Payment Vector for round 26 and Node A updated with value 6.993827160493847

Node B

- Total payments in for Node B

Relative Payment in to Node B from Node A is 0.18181818181818182
Total dollar payment (i.e. liabilities) by Node A (i.e. p_1) is 6.993827160494084

Relative Payment in to Node B from Node C is 0.25
Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0
Total payments in to Node B is 2.2716049382716514 in round 26.

- Liabilities for Node B

Liability of Node B to Node A (i.e. P_{10}) is 7.0

Liability of Node B to Node C (i.e. P_{12}) is 9.0
 Total nominal liabilities for Node B (i.e. p_{bar_2}) is 16.0

Payment out is $\min[\text{payment out}, \text{total cash flow}]$ i.e. $\min[16.0, 2.2716049382716514]$
 Relative Payment in to Node B from Node A is 0.18181818181818182
 Total dollar payment (i.e. liabilities) by Node A (i.e. p_1) is 6.993827160494084
 Relative Payment in to Node B from Node C is 0.25
 Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0
 Total payments in to Node B is 2.2716049382716514 in round 26.
 Relative Payment in to Node B from Node A is 0.18181818181818182
 Total dollar payment (i.e. liabilities) by Node A (i.e. p_1) is 6.993827160494084
 Relative Payment in to Node B from Node C is 0.25
 Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0
 Total payments in to Node B is 2.2716049382716514 in round 26.
 Relative Payment in to Node B from Node A is 0.18181818181818182
 Total dollar payment (i.e. liabilities) by Node A (i.e. p_1) is 6.993827160494084
 Relative Payment in to Node B from Node C is 0.25
 Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0
 Total payments in to Node B is 2.2716049382716514 in round 26.
 Round 26 and Node B has defaulted due to nominal obligations 16.0 being greater than cash flow 2.2716049382716514. Default loss for Node B is 0.0

- Total Dollar Payment Vector for round 26 and Node B
 Total Dollar Payment Vector for round 26 and Node B updated with value 2.2716049382716514

Node C

- Total payments in for Node C
 Relative Payment in to Node C from Node A is 0.8181818181818182
 Total dollar payment (i.e. liabilities) by Node A (i.e. p_1) is 6.993827160494084
 Relative Payment in to Node C from Node B is 0.5625
 Total dollar payment (i.e. liabilities) by Node B (i.e. p_2) is 2.2716049382716514
 Total payments in to Node C is 7.0000000000000236 in round 26.

- Liabilities for Node C
 Liability of Node C to Node A (i.e. P_{20}) is 3.0
 Liability of Node C to Node B (i.e. P_{21}) is 1.0
 Total nominal liabilities for Node C (i.e. p_{bar_3}) is 4.0

Payment out is $\min[\text{payment out}, \text{total cash flow}]$ i.e. $\min[4.0, 11.0000000000000236]$

- Total Dollar Payment Vector for round 26 and Node C
Total Dollar Payment Vector for round 26 and Node C updated with value 4.0

TOTAL PAYMENT VECTOR - round 26

Total payment by Node A (i.e. p_1): 6.993827160493847
Total payment by Node B (i.e. p_2): 2.2716049382716514
Total payment by Node C (i.e. p_3): 4.0
[6.993827160493847, 2.2716049382716514, 4.0]

UPDATE EQUITY (i.e. BOOK VALUE) FOR EACH NODE - round 26

Node A

Total operating cash flow (exogenous assets) 3.0.
Relative Payment in to Node A from Node B is 0.4375
Total dollar payment (i.e. liabilities) by Node B (i.e. p_2) is
2.2716049382716514
Relative Payment in to Node A from Node C is 0.75
Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0
Total payments in to Node A is 3.9938271604938476 in round 26.
Total dollar payment (i.e. liabilities) by Node A (i.e. p_1) is
6.993827160493847
Equity Vector for round 26 and Node A
Equity Vector for round 26 and Node A updated with value 0.0 i.e. total cash
flow 6.993827160493847 minus total payments out (liabilities)
6.993827160493847.

Node B

Total operating cash flow (exogenous assets) 0.0.
Relative Payment in to Node B from Node A is 0.181818181818182
Total dollar payment (i.e. liabilities) by Node A (i.e. p_1) is
6.993827160494084
Relative Payment in to Node B from Node C is 0.25
Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0
Total payments in to Node B is 2.2716049382716514 in round 26.
Total dollar payment (i.e. liabilities) by Node B (i.e. p_2) is
2.2716049382716514
Equity Vector for round 26 and Node B
Equity Vector for round 26 and Node B updated with value 0.0 i.e. total cash
flow 2.2716049382716514 minus total payments out (liabilities)
2.2716049382716514.

Node C

Total operating cash flow (exogenous assets) 4.0.
 Relative Payment in to Node C from Node A is 0.8181818181818182
 Total dollar payment (i.e. liabilities) by Node A (i.e. p_1) is
 6.993827160494084
 Relative Payment in to Node C from Node B is 0.5625
 Total dollar payment (i.e. liabilities) by Node B (i.e. p_2) is
 2.2716049382716514
 Total payments in to Node C is 7.0000000000000236 in round 26.
 Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0
 Equity Vector for round 26 and Node C
 Equity Vector for round 26 and Node C updated with value 7.0000000000000236 i.e.
 total cash flow 11.0000000000000236 minus total payments out (liabilities) 4.0.

EQUITY FOR EACH NODE - round 26

Equity for Node A: 0.0
 Equity for Node B: 0.0
 Equity for Node C: 7.0000000000000236
 [0.0, 0.0, 7.0000000000000236]

ROUND 26 DEFAULTERS

Node A has defaulted in round 26
 {'A': True, 'B': True, 'C': False}
 The payment vectors for the previous round and current round (i.e. round 26) are
 not identical, algorithm will proceed for another round.

END OF ROUND 26

START OF ROUND 27

TOTAL OBLIGATION VECTOR - round 27

i.e. total nominal obligations for each node i.e. p_bar_i...
 Total nominal obligation for Node A (i.e. p_bar_1): 11.0
 Total nominal obligation for Node B (i.e. p_bar_2): 16.0
 Total nominal obligation for Node C (i.e. p_bar_3): 4.0

TOTAL PAYMENT MADE PER NODE - round 27

i.e. $\min[\text{nominal obligations, cashflow (payments in + exogenous cash flow)}]$ for each node...

Node A

- Total payments in for Node A

Relative Payment in to Node A from Node B is 0.4375

Total dollar payment (i.e. liabilities) by Node B (i.e. p_2) is 2.2716049382716514

Relative Payment in to Node A from Node C is 0.75

Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0

Total payments in to Node A is 3.9938271604938476 in round 27.

- Liabilities for Node A

Liability of Node A to Node B (i.e. P_{01}) is 2.0

Liability of Node A to Node C (i.e. P_{02}) is 9.0

Total nominal liabilities for Node A (i.e. p_{bar_1}) is 11.0

Payment out is $\min[\text{payment out, total cash flow}]$ i.e. $\min[11.0, 6.993827160493847]$

Relative Payment in to Node A from Node B is 0.4375

Total dollar payment (i.e. liabilities) by Node B (i.e. p_2) is 2.2716049382716514

Relative Payment in to Node A from Node C is 0.75

Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0

Total payments in to Node A is 3.9938271604938476 in round 27.

Relative Payment in to Node A from Node B is 0.4375

Total dollar payment (i.e. liabilities) by Node B (i.e. p_2) is 2.2716049382716514

Relative Payment in to Node A from Node C is 0.75

Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0

Total payments in to Node A is 3.9938271604938476 in round 27.

Relative Payment in to Node A from Node B is 0.4375

Total dollar payment (i.e. liabilities) by Node B (i.e. p_2) is 2.2716049382716514

Relative Payment in to Node A from Node C is 0.75

Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0

Total payments in to Node A is 3.9938271604938476 in round 27.

Round 27 and Node A has defaulted due to nominal obligations 11.0 being greater than cash flow 6.993827160493847. Default loss for Node A is 0.0

- Total Dollar Payment Vector for round 27 and Node A

Total Dollar Payment Vector for round 27 and Node A updated with value

6.993827160493847

Node B

- Total payments in for Node B

Relative Payment in to Node B from Node A is 0.181818181818182

Total dollar payment (i.e. liabilities) by Node A (i.e. p_1) is
6.993827160493847

Relative Payment in to Node B from Node C is 0.25

Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0

Total payments in to Node B is 2.271604938271609 in round 27.

- Liabilities for Node B

Liability of Node B to Node A (i.e. P_{10}) is 7.0

Liability of Node B to Node C (i.e. P_{12}) is 9.0

Total nominal liabilities for Node B (i.e. p_{bar_2}) is 16.0

Payment out is $\min[\text{payment out}, \text{total cash flow}]$ i.e. $\min[16.0, 2.271604938271609]$

Relative Payment in to Node B from Node A is 0.181818181818182

Total dollar payment (i.e. liabilities) by Node A (i.e. p_1) is
6.993827160493847

Relative Payment in to Node B from Node C is 0.25

Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0

Total payments in to Node B is 2.271604938271609 in round 27.

Relative Payment in to Node B from Node A is 0.181818181818182

Total dollar payment (i.e. liabilities) by Node A (i.e. p_1) is
6.993827160493847

Relative Payment in to Node B from Node C is 0.25

Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0

Total payments in to Node B is 2.271604938271609 in round 27.

Relative Payment in to Node B from Node A is 0.181818181818182

Total dollar payment (i.e. liabilities) by Node A (i.e. p_1) is
6.993827160493847

Relative Payment in to Node B from Node C is 0.25

Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0

Total payments in to Node B is 2.271604938271609 in round 27.

Round 27 and Node B has defaulted due to nominal obligations 16.0 being greater than cash flow 2.271604938271609. Default loss for Node B is 0.0

- Total Dollar Payment Vector for round 27 and Node B

Total Dollar Payment Vector for round 27 and Node B updated with value
2.271604938271609

Node C

- Total payments in for Node C

Relative Payment in to Node C from Node A is 0.8181818181818182

Total dollar payment (i.e. liabilities) by Node A (i.e. p_1) is
6.993827160493847

Relative Payment in to Node C from Node B is 0.5625

Total dollar payment (i.e. liabilities) by Node B (i.e. p_2) is
2.2716049382716514

Total payments in to Node C is 7.000000000000043 in round 27.

- Liabilities for Node C

Liability of Node C to Node A (i.e. P_20) is 3.0

Liability of Node C to Node B (i.e. P_21) is 1.0

Total nominal liabilities for Node C (i.e. p_bar_3) is 4.0

Payment out is min[payment out, total cash flow] i.e. min[4.0,
11.000000000000043]

- Total Dollar Payment Vector for round 27 and Node C

Total Dollar Payment Vector for round 27 and Node C updated with value 4.0

TOTAL PAYMENT VECTOR - round 27

Total payment by Node A (i.e. p_1): 6.993827160493847

Total payment by Node B (i.e. p_2): 2.271604938271609

Total payment by Node C (i.e. p_3): 4.0

[6.993827160493847, 2.271604938271609, 4.0]

UPDATE EQUITY (i.e. BOOK VALUE) FOR EACH NODE - round 27

Node A

Total operating cash flow (exogenous assets) 3.0.

Relative Payment in to Node A from Node B is 0.4375

Total dollar payment (i.e. liabilities) by Node B (i.e. p_2) is
2.2716049382716514

Relative Payment in to Node A from Node C is 0.75

Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0

Total payments in to Node A is 3.9938271604938476 in round 27.

Total dollar payment (i.e. liabilities) by Node A (i.e. p_1) is
6.993827160493847

Equity Vector for round 27 and Node A

Equity Vector for round 27 and Node A updated with value 0.0 i.e. total cash
flow 6.993827160493847 minus total payments out (liabilities)
6.993827160493847.

Node B

Total operating cash flow (exogenous assets) 0.0.

Relative Payment in to Node B from Node A is 0.181818181818182
Total dollar payment (i.e. liabilities) by Node A (i.e. p_1) is
6.993827160493847
Relative Payment in to Node B from Node C is 0.25
Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0
Total payments in to Node B is 2.271604938271609 in round 27.
Total dollar payment (i.e. liabilities) by Node B (i.e. p_2) is
2.271604938271609
Equity Vector for round 27 and Node B
Equity Vector for round 27 and Node B updated with value 0.0 i.e. total cash
flow 2.271604938271609 minus total payments out (liabilities)
2.271604938271609.

Node C

Total operating cash flow (exogenous assets) 4.0.
Relative Payment in to Node C from Node A is 0.8181818181818182
Total dollar payment (i.e. liabilities) by Node A (i.e. p_1) is
6.993827160493847
Relative Payment in to Node C from Node B is 0.5625
Total dollar payment (i.e. liabilities) by Node B (i.e. p_2) is
2.2716049382716514
Total payments in to Node C is 7.0000000000000043 in round 27.
Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0
Equity Vector for round 27 and Node C
Equity Vector for round 27 and Node C updated with value 7.0000000000000043 i.e.
total cash flow 11.0000000000000043 minus total payments out (liabilities) 4.0.

EQUITY FOR EACH NODE - round 27

Equity for Node A: 0.0
Equity for Node B: 0.0
Equity for Node C: 7.0000000000000043
[0.0, 0.0, 7.0000000000000043]

ROUND 27 DEFAULTERS

Node A has defaulted in round 27
{'A': True, 'B': True, 'C': False}
The payment vectors for the previous round and current round (i.e. round 27) are
not identical, algorithm will proceed for another round.

END OF ROUND 27

START OF ROUND 28

TOTAL OBLIGATION VECTOR - round 28

i.e. total nominal obligations for each node i.e. p_{bar_i} ...
Total nominal obligation for Node A (i.e. p_{bar_1}): 11.0
Total nominal obligation for Node B (i.e. p_{bar_2}): 16.0
Total nominal obligation for Node C (i.e. p_{bar_3}): 4.0

TOTAL PAYMENT MADE PER NODE - round 28

i.e. $\min[\text{nominal obligations, cashflow (payments in + exogenous cash flow)}]$ for each node...

Node A

- Total payments in for Node A
Relative Payment in to Node A from Node B is 0.4375
Total dollar payment (i.e. liabilities) by Node B (i.e. p_2) is 2.271604938271609
Relative Payment in to Node A from Node C is 0.75
Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0
Total payments in to Node A is 3.993827160493829 in round 28.

- Liabilities for Node A
Liability of Node A to Node B (i.e. P_{01}) is 2.0
Liability of Node A to Node C (i.e. P_{02}) is 9.0
Total nominal liabilities for Node A (i.e. p_{bar_1}) is 11.0

Payment out is $\min[\text{payment out, total cash flow}]$ i.e. $\min[11.0, 6.993827160493829]$

Relative Payment in to Node A from Node B is 0.4375
Total dollar payment (i.e. liabilities) by Node B (i.e. p_2) is 2.271604938271609
Relative Payment in to Node A from Node C is 0.75
Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0
Total payments in to Node A is 3.993827160493829 in round 28.
Relative Payment in to Node A from Node B is 0.4375
Total dollar payment (i.e. liabilities) by Node B (i.e. p_2) is 2.271604938271609

Relative Payment in to Node A from Node C is 0.75
 Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0
 Total payments in to Node A is 3.993827160493829 in round 28.
 Relative Payment in to Node A from Node B is 0.4375
 Total dollar payment (i.e. liabilities) by Node B (i.e. p_2) is
 2.271604938271609
 Relative Payment in to Node A from Node C is 0.75
 Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0
 Total payments in to Node A is 3.993827160493829 in round 28.
 Round 28 and Node A has defaulted due to nominal obligations 11.0 being greater
 than cash flow 6.993827160493829. Default loss for Node A is 0.0

- Total Dollar Payment Vector for round 28 and Node A
 Total Dollar Payment Vector for round 28 and Node A updated with value
 6.993827160493829

Node B

- Total payments in for Node B
 Relative Payment in to Node B from Node A is 0.181818181818182
 Total dollar payment (i.e. liabilities) by Node A (i.e. p_1) is
 6.993827160493847
 Relative Payment in to Node B from Node C is 0.25
 Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0
 Total payments in to Node B is 2.271604938271609 in round 28.

- Liabilities for Node B
 Liability of Node B to Node A (i.e. P_10) is 7.0
 Liability of Node B to Node C (i.e. P_12) is 9.0
 Total nominal liabilities for Node B (i.e. p_bar_2) is 16.0

Payment out is min[payment out, total cash flow] i.e. min[16.0,
 2.271604938271609]
 Relative Payment in to Node B from Node A is 0.181818181818182
 Total dollar payment (i.e. liabilities) by Node A (i.e. p_1) is
 6.993827160493847
 Relative Payment in to Node B from Node C is 0.25
 Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0
 Total payments in to Node B is 2.271604938271609 in round 28.
 Relative Payment in to Node B from Node A is 0.181818181818182
 Total dollar payment (i.e. liabilities) by Node A (i.e. p_1) is
 6.993827160493847
 Relative Payment in to Node B from Node C is 0.25
 Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0
 Total payments in to Node B is 2.271604938271609 in round 28.
 Relative Payment in to Node B from Node A is 0.181818181818182
 Total dollar payment (i.e. liabilities) by Node A (i.e. p_1) is
 6.993827160493847

Relative Payment in to Node B from Node C is 0.25
Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0
Total payments in to Node B is 2.271604938271609 in round 28.
Round 28 and Node B has defaulted due to nominal obligations 16.0 being greater than cash flow 2.271604938271609. Default loss for Node B is 0.0

- Total Dollar Payment Vector for round 28 and Node B
Total Dollar Payment Vector for round 28 and Node B updated with value 2.271604938271609

Node C

- Total payments in for Node C
Relative Payment in to Node C from Node A is 0.8181818181818182
Total dollar payment (i.e. liabilities) by Node A (i.e. p_1) is 6.993827160493847
Relative Payment in to Node C from Node B is 0.5625
Total dollar payment (i.e. liabilities) by Node B (i.e. p_2) is 2.271604938271609
Total payments in to Node C is 7.00000000000000195 in round 28.

- Liabilities for Node C
Liability of Node C to Node A (i.e. P_20) is 3.0
Liability of Node C to Node B (i.e. P_21) is 1.0
Total nominal liabilities for Node C (i.e. p_bar_3) is 4.0

Payment out is min[payment out, total cash flow] i.e. min[4.0, 11.000000000000002]

- Total Dollar Payment Vector for round 28 and Node C
Total Dollar Payment Vector for round 28 and Node C updated with value 4.0

TOTAL PAYMENT VECTOR - round 28

Total payment by Node A (i.e. p_1): 6.993827160493829
Total payment by Node B (i.e. p_2): 2.271604938271609
Total payment by Node C (i.e. p_3): 4.0
[6.993827160493829, 2.271604938271609, 4.0]

UPDATE EQUITY (i.e. BOOK VALUE) FOR EACH NODE - round 28

Node A

Total operating cash flow (exogenous assets) 3.0.
Relative Payment in to Node A from Node B is 0.4375

Total dollar payment (i.e. liabilities) by Node B (i.e. p_2) is
2.271604938271609
Relative Payment in to Node A from Node C is 0.75
Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0
Total payments in to Node A is 3.993827160493829 in round 28.
Total dollar payment (i.e. liabilities) by Node A (i.e. p_1) is
6.993827160493829
Equity Vector for round 28 and Node A
Equity Vector for round 28 and Node A updated with value 0.0 i.e. total cash
flow 6.993827160493829 minus total payments out (liabilities)
6.993827160493829.

Node B

Total operating cash flow (exogenous assets) 0.0.
Relative Payment in to Node B from Node A is 0.181818181818182
Total dollar payment (i.e. liabilities) by Node A (i.e. p_1) is
6.993827160493847
Relative Payment in to Node B from Node C is 0.25
Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0
Total payments in to Node B is 2.271604938271609 in round 28.
Total dollar payment (i.e. liabilities) by Node B (i.e. p_2) is
2.271604938271609
Equity Vector for round 28 and Node B
Equity Vector for round 28 and Node B updated with value 0.0 i.e. total cash
flow 2.271604938271609 minus total payments out (liabilities)
2.271604938271609.

Node C

Total operating cash flow (exogenous assets) 4.0.
Relative Payment in to Node C from Node A is 0.8181818181818182
Total dollar payment (i.e. liabilities) by Node A (i.e. p_1) is
6.993827160493847
Relative Payment in to Node C from Node B is 0.5625
Total dollar payment (i.e. liabilities) by Node B (i.e. p_2) is
2.271604938271609
Total payments in to Node C is 7.0000000000000195 in round 28.
Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0
Equity Vector for round 28 and Node C
Equity Vector for round 28 and Node C updated with value 7.0000000000000195 i.e.
total cash flow 11.00000000000002 minus total payments out (liabilities) 4.0.

EQUITY FOR EACH NODE - round 28

Equity for Node A: 0.0
Equity for Node B: 0.0

Equity for Node C: 7.000000000000000195
[0.0, 0.0, 7.000000000000000195]

ROUND 28 DEFAULTERS

Node A has defaulted in round 28
{'A': True, 'B': True, 'C': False}

The payment vectors for the previous round and current round (i.e. round 28) are not identical, algorithm will proceed for another round.

END OF ROUND 28

START OF ROUND 29

TOTAL OBLIGATION VECTOR - round 29

i.e. total nominal obligations for each node i.e. p_{bar_i}
Total nominal obligation for Node A (i.e. p_{bar_1}): 11.0
Total nominal obligation for Node B (i.e. p_{bar_2}): 16.0
Total nominal obligation for Node C (i.e. p_{bar_3}): 4.0

TOTAL PAYMENT MADE PER NODE - round 29

i.e. $\min[\text{nominal obligations, cashflow (payments in + exogenous cash flow)}]$ for each node...

Node A

- Total payments in for Node A
Relative Payment in to Node A from Node B is 0.4375
Total dollar payment (i.e. liabilities) by Node B (i.e. p_2) is 2.271604938271609
Relative Payment in to Node A from Node C is 0.75
Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0
Total payments in to Node A is 3.993827160493829 in round 29.

- Liabilities for Node A
Liability of Node A to Node B (i.e. P_{01}) is 2.0

Liability of Node A to Node C (i.e. P_{02}) is 9.0
 Total nominal liabilities for Node A (i.e. p_{bar_1}) is 11.0

 Payment out is $\min[\text{payment out, total cash flow}]$ i.e. $\min[11.0, 6.993827160493829]$
 Relative Payment in to Node A from Node B is 0.4375
 Total dollar payment (i.e. liabilities) by Node B (i.e. p_2) is 2.271604938271609
 Relative Payment in to Node A from Node C is 0.75
 Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0
 Total payments in to Node A is 3.993827160493829 in round 29.
 Relative Payment in to Node A from Node B is 0.4375
 Total dollar payment (i.e. liabilities) by Node B (i.e. p_2) is 2.271604938271609
 Relative Payment in to Node A from Node C is 0.75
 Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0
 Total payments in to Node A is 3.993827160493829 in round 29.
 Relative Payment in to Node A from Node B is 0.4375
 Total dollar payment (i.e. liabilities) by Node B (i.e. p_2) is 2.271604938271609
 Relative Payment in to Node A from Node C is 0.75
 Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0
 Total payments in to Node A is 3.993827160493829 in round 29.
 Round 29 and Node A has defaulted due to nominal obligations 11.0 being greater than cash flow 6.993827160493829. Default loss for Node A is 0.0

- Total Dollar Payment Vector for round 29 and Node A
 Total Dollar Payment Vector for round 29 and Node A updated with value 6.993827160493829

Node B

- Total payments in for Node B
 Relative Payment in to Node B from Node A is 0.181818181818182
 Total dollar payment (i.e. liabilities) by Node A (i.e. p_1) is 6.993827160493829
 Relative Payment in to Node B from Node C is 0.25
 Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0
 Total payments in to Node B is 2.2716049382716053 in round 29.

- Liabilities for Node B
 Liability of Node B to Node A (i.e. P_{10}) is 7.0
 Liability of Node B to Node C (i.e. P_{12}) is 9.0
 Total nominal liabilities for Node B (i.e. p_{bar_2}) is 16.0

Payment out is $\min[\text{payment out, total cash flow}]$ i.e. $\min[16.0, 2.2716049382716053]$
 Relative Payment in to Node B from Node A is 0.181818181818182

Total dollar payment (i.e. liabilities) by Node A (i.e. p_1) is
6.993827160493829
Relative Payment in to Node B from Node C is 0.25
Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0
Total payments in to Node B is 2.2716049382716053 in round 29.
Relative Payment in to Node B from Node A is 0.181818181818182
Total dollar payment (i.e. liabilities) by Node A (i.e. p_1) is
6.993827160493829
Relative Payment in to Node B from Node C is 0.25
Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0
Total payments in to Node B is 2.2716049382716053 in round 29.
Relative Payment in to Node B from Node A is 0.181818181818182
Total dollar payment (i.e. liabilities) by Node A (i.e. p_1) is
6.993827160493829
Relative Payment in to Node B from Node C is 0.25
Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0
Total payments in to Node B is 2.2716049382716053 in round 29.
Round 29 and Node B has defaulted due to nominal obligations 16.0 being greater
than cash flow 2.2716049382716053. Default loss for Node B is 0.0

- Total Dollar Payment Vector for round 29 and Node B
Total Dollar Payment Vector for round 29 and Node B updated with value
2.2716049382716053

Node C

- Total payments in for Node C
Relative Payment in to Node C from Node A is 0.8181818181818182
Total dollar payment (i.e. liabilities) by Node A (i.e. p_1) is
6.993827160493829
Relative Payment in to Node C from Node B is 0.5625
Total dollar payment (i.e. liabilities) by Node B (i.e. p_2) is
2.271604938271609
Total payments in to Node C is 7.0000000000000036 in round 29.

- Liabilities for Node C
Liability of Node C to Node A (i.e. P_20) is 3.0
Liability of Node C to Node B (i.e. P_21) is 1.0
Total nominal liabilities for Node C (i.e. p_bar_3) is 4.0

Payment out is min[payment out, total cash flow] i.e. min[4.0,
11.000000000000004]

- Total Dollar Payment Vector for round 29 and Node C
Total Dollar Payment Vector for round 29 and Node C updated with value 4.0

TOTAL PAYMENT VECTOR - round 29

Total payment by Node A (i.e. p_1): 6.993827160493829
Total payment by Node B (i.e. p_2): 2.2716049382716053
Total payment by Node C (i.e. p_3): 4.0
[6.993827160493829, 2.2716049382716053, 4.0]

UPDATE EQUITY (i.e. BOOK VALUE) FOR EACH NODE - round 29

Node A

Total operating cash flow (exogenous assets) 3.0.
Relative Payment in to Node A from Node B is 0.4375
Total dollar payment (i.e. liabilities) by Node B (i.e. p_2) is
2.271604938271609
Relative Payment in to Node A from Node C is 0.75
Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0
Total payments in to Node A is 3.993827160493829 in round 29.
Total dollar payment (i.e. liabilities) by Node A (i.e. p_1) is
6.993827160493829
Equity Vector for round 29 and Node A
Equity Vector for round 29 and Node A updated with value 0.0 i.e. total cash
flow 6.993827160493829 minus total payments out (liabilities)
6.993827160493829.

Node B

Total operating cash flow (exogenous assets) 0.0.
Relative Payment in to Node B from Node A is 0.181818181818182
Total dollar payment (i.e. liabilities) by Node A (i.e. p_1) is
6.993827160493829
Relative Payment in to Node B from Node C is 0.25
Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0
Total payments in to Node B is 2.2716049382716053 in round 29.
Total dollar payment (i.e. liabilities) by Node B (i.e. p_2) is
2.2716049382716053
Equity Vector for round 29 and Node B
Equity Vector for round 29 and Node B updated with value 0.0 i.e. total cash
flow 2.2716049382716053 minus total payments out (liabilities)
2.2716049382716053.

Node C

Total operating cash flow (exogenous assets) 4.0.
Relative Payment in to Node C from Node A is 0.8181818181818182
Total dollar payment (i.e. liabilities) by Node A (i.e. p_1) is
6.993827160493829
Relative Payment in to Node C from Node B is 0.5625
Total dollar payment (i.e. liabilities) by Node B (i.e. p_2) is

2.271604938271609

Total payments in to Node C is 7.00000000000000036 in round 29.

Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0

Equity Vector for round 29 and Node C

Equity Vector for round 29 and Node C updated with value 7.00000000000000036 i.e.
total cash flow 11.0000000000000004 minus total payments out (liabilities) 4.0.

EQUITY FOR EACH NODE - round 29

Equity for Node A: 0.0

Equity for Node B: 0.0

Equity for Node C: 7.00000000000000036

[0.0, 0.0, 7.00000000000000036]

ROUND 29 DEFAULTERS

Node A has defaulted in round 29

{'A': True, 'B': True, 'C': False}

The payment vectors for the previous round and current round (i.e. round 29) are
not identical, algorithm will proceed for another round.

END OF ROUND 29

START OF ROUND 30

TOTAL OBLIGATION VECTOR - round 30

i.e. total nominal obligations for each node i.e. p_bar_i...

Total nominal obligation for Node A (i.e. p_bar_1): 11.0

Total nominal obligation for Node B (i.e. p_bar_2): 16.0

Total nominal obligation for Node C (i.e. p_bar_3): 4.0

TOTAL PAYMENT MADE PER NODE - round 30

i.e. min[nominal obligations, cashflow (payments in + exogenous cash flow)] for

each node...

Node A

- Total payments in for Node A

Relative Payment in to Node A from Node B is 0.4375

Total dollar payment (i.e. liabilities) by Node B (i.e. p_2) is
2.2716049382716053

Relative Payment in to Node A from Node C is 0.75

Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0

Total payments in to Node A is 3.9938271604938276 in round 30.

- Liabilities for Node A

Liability of Node A to Node B (i.e. P_{01}) is 2.0

Liability of Node A to Node C (i.e. P_{02}) is 9.0

Total nominal liabilities for Node A (i.e. p_{bar_1}) is 11.0

Payment out is $\min[\text{payment out, total cash flow}]$ i.e. $\min[11.0,$
6.993827160493828]

Relative Payment in to Node A from Node B is 0.4375

Total dollar payment (i.e. liabilities) by Node B (i.e. p_2) is
2.2716049382716053

Relative Payment in to Node A from Node C is 0.75

Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0

Total payments in to Node A is 3.9938271604938276 in round 30.

Relative Payment in to Node A from Node B is 0.4375

Total dollar payment (i.e. liabilities) by Node B (i.e. p_2) is
2.2716049382716053

Relative Payment in to Node A from Node C is 0.75

Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0

Total payments in to Node A is 3.9938271604938276 in round 30.

Relative Payment in to Node A from Node B is 0.4375

Total dollar payment (i.e. liabilities) by Node B (i.e. p_2) is
2.2716049382716053

Relative Payment in to Node A from Node C is 0.75

Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0

Total payments in to Node A is 3.9938271604938276 in round 30.

Round 30 and Node A has defaulted due to nominal obligations 11.0 being greater
than cash flow 6.993827160493828. Default loss for Node A is 0.0

- Total Dollar Payment Vector for round 30 and Node A

Total Dollar Payment Vector for round 30 and Node A updated with value
6.993827160493828

Node B

- Total payments in for Node B

Relative Payment in to Node B from Node A is 0.18181818181818182

Total dollar payment (i.e. liabilities) by Node A (i.e. p_1) is
6.993827160493829
Relative Payment in to Node B from Node C is 0.25
Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0
Total payments in to Node B is 2.2716049382716053 in round 30.

- Liabilities for Node B

Liability of Node B to Node A (i.e. P_{10}) is 7.0
Liability of Node B to Node C (i.e. P_{12}) is 9.0
Total nominal liabilities for Node B (i.e. p_{bar_2}) is 16.0

Payment out is $\min[\text{payment out, total cash flow}]$ i.e. $\min[16.0, 2.2716049382716053]$

Relative Payment in to Node B from Node A is 0.181818181818182
Total dollar payment (i.e. liabilities) by Node A (i.e. p_1) is
6.993827160493829
Relative Payment in to Node B from Node C is 0.25
Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0
Total payments in to Node B is 2.2716049382716053 in round 30.
Relative Payment in to Node B from Node A is 0.181818181818182
Total dollar payment (i.e. liabilities) by Node A (i.e. p_1) is
6.993827160493829
Relative Payment in to Node B from Node C is 0.25
Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0
Total payments in to Node B is 2.2716049382716053 in round 30.
Relative Payment in to Node B from Node A is 0.181818181818182
Total dollar payment (i.e. liabilities) by Node A (i.e. p_1) is
6.993827160493829
Relative Payment in to Node B from Node C is 0.25
Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0
Total payments in to Node B is 2.2716049382716053 in round 30.
Round 30 and Node B has defaulted due to nominal obligations 16.0 being greater
than cash flow 2.2716049382716053. Default loss for Node B is 0.0

- Total Dollar Payment Vector for round 30 and Node B

Total Dollar Payment Vector for round 30 and Node B updated with value
2.2716049382716053

Node C

- Total payments in for Node C

Relative Payment in to Node C from Node A is 0.8181818181818182
Total dollar payment (i.e. liabilities) by Node A (i.e. p_1) is
6.993827160493829
Relative Payment in to Node C from Node B is 0.5625
Total dollar payment (i.e. liabilities) by Node B (i.e. p_2) is
2.2716049382716053
Total payments in to Node C is 7.0000000000000002 in round 30.

- Liabilities for Node C

Liability of Node C to Node A (i.e. P_20) is 3.0

Liability of Node C to Node B (i.e. P_21) is 1.0

Total nominal liabilities for Node C (i.e. p_bar_3) is 4.0

Payment out is min[payment out, total cash flow] i.e. min[4.0,
11.000000000000002]

- Total Dollar Payment Vector for round 30 and Node C

Total Dollar Payment Vector for round 30 and Node C updated with value 4.0

TOTAL PAYMENT VECTOR - round 30

Total payment by Node A (i.e. p_1): 6.993827160493828

Total payment by Node B (i.e. p_2): 2.2716049382716053

Total payment by Node C (i.e. p_3): 4.0

[6.993827160493828, 2.2716049382716053, 4.0]

UPDATE EQUITY (i.e. BOOK VALUE) FOR EACH NODE - round 30

Node A

Total operating cash flow (exogenous assets) 3.0.

Relative Payment in to Node A from Node B is 0.4375

Total dollar payment (i.e. liabilities) by Node B (i.e. p_2) is
2.2716049382716053

Relative Payment in to Node A from Node C is 0.75

Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0

Total payments in to Node A is 3.9938271604938276 in round 30.

Total dollar payment (i.e. liabilities) by Node A (i.e. p_1) is
6.993827160493828

Equity Vector for round 30 and Node A

Equity Vector for round 30 and Node A updated with value 0.0 i.e. total cash
flow 6.993827160493828 minus total payments out (liabilities)
6.993827160493828.

Node B

Total operating cash flow (exogenous assets) 0.0.

Relative Payment in to Node B from Node A is 0.18181818181818182

Total dollar payment (i.e. liabilities) by Node A (i.e. p_1) is
6.993827160493829

Relative Payment in to Node B from Node C is 0.25

Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0

Total payments in to Node B is 2.2716049382716053 in round 30.

Total dollar payment (i.e. liabilities) by Node B (i.e. p_2) is
2.2716049382716053
Equity Vector for round 30 and Node B
Equity Vector for round 30 and Node B updated with value 0.0 i.e. total cash
flow 2.2716049382716053 minus total payments out (liabilities)
2.2716049382716053.

Node C

Total operating cash flow (exogenous assets) 4.0.
Relative Payment in to Node C from Node A is 0.8181818181818182
Total dollar payment (i.e. liabilities) by Node A (i.e. p_1) is
6.993827160493829
Relative Payment in to Node C from Node B is 0.5625
Total dollar payment (i.e. liabilities) by Node B (i.e. p_2) is
2.2716049382716053
Total payments in to Node C is 7.0000000000000002 in round 30.
Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0
Equity Vector for round 30 and Node C
Equity Vector for round 30 and Node C updated with value 7.0000000000000002 i.e.
total cash flow 11.0000000000000002 minus total payments out (liabilities) 4.0.

EQUITY FOR EACH NODE - round 30

Equity for Node A: 0.0
Equity for Node B: 0.0
Equity for Node C: 7.0000000000000002
[0.0, 0.0, 7.0000000000000002]

ROUND 30 DEFAULTERS

Node A has defaulted in round 30
{'A': True, 'B': True, 'C': False}
The payment vectors for the previous round and current round (i.e. round 30) are
not identical, algorithm will proceed for another round.

END OF ROUND 30

START OF ROUND 31

TOTAL OBLIGATION VECTOR - round 31

i.e. total nominal obligations for each node i.e. $p_{\bar{i}}$
Total nominal obligation for Node A (i.e. $p_{\bar{1}}$): 11.0
Total nominal obligation for Node B (i.e. $p_{\bar{2}}$): 16.0
Total nominal obligation for Node C (i.e. $p_{\bar{3}}$): 4.0

TOTAL PAYMENT MADE PER NODE - round 31

i.e. $\min[\text{nominal obligations, cashflow (payments in + exogenous cash flow)}]$ for each node...

Node A

- Total payments in for Node A
Relative Payment in to Node A from Node B is 0.4375
Total dollar payment (i.e. liabilities) by Node B (i.e. p_2) is 2.2716049382716053
Relative Payment in to Node A from Node C is 0.75
Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0
Total payments in to Node A is 3.9938271604938276 in round 31.

- Liabilities for Node A
Liability of Node A to Node B (i.e. P_{01}) is 2.0
Liability of Node A to Node C (i.e. P_{02}) is 9.0
Total nominal liabilities for Node A (i.e. $p_{\bar{1}}$) is 11.0

Payment out is $\min[\text{payment out, total cash flow}]$ i.e. $\min[11.0, 6.993827160493828]$

Relative Payment in to Node A from Node B is 0.4375
Total dollar payment (i.e. liabilities) by Node B (i.e. p_2) is 2.2716049382716053
Relative Payment in to Node A from Node C is 0.75
Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0
Total payments in to Node A is 3.9938271604938276 in round 31.
Relative Payment in to Node A from Node B is 0.4375
Total dollar payment (i.e. liabilities) by Node B (i.e. p_2) is 2.2716049382716053
Relative Payment in to Node A from Node C is 0.75
Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0
Total payments in to Node A is 3.9938271604938276 in round 31.
Relative Payment in to Node A from Node B is 0.4375
Total dollar payment (i.e. liabilities) by Node B (i.e. p_2) is 2.2716049382716053

Relative Payment in to Node A from Node C is 0.75
Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0
Total payments in to Node A is 3.9938271604938276 in round 31.
Round 31 and Node A has defaulted due to nominal obligations 11.0 being greater than cash flow 6.993827160493828. Default loss for Node A is 0.0

- Total Dollar Payment Vector for round 31 and Node A
Total Dollar Payment Vector for round 31 and Node A updated with value 6.993827160493828

Node B

- Total payments in for Node B
Relative Payment in to Node B from Node A is 0.181818181818182
Total dollar payment (i.e. liabilities) by Node A (i.e. p_1) is 6.993827160493828
Relative Payment in to Node B from Node C is 0.25
Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0
Total payments in to Node B is 2.2716049382716053 in round 31.

- Liabilities for Node B
Liability of Node B to Node A (i.e. P_10) is 7.0
Liability of Node B to Node C (i.e. P_12) is 9.0
Total nominal liabilities for Node B (i.e. p_bar_2) is 16.0

Payment out is min[payment out, total cash flow] i.e. min[16.0, 2.2716049382716053]

Relative Payment in to Node B from Node A is 0.181818181818182
Total dollar payment (i.e. liabilities) by Node A (i.e. p_1) is 6.993827160493828
Relative Payment in to Node B from Node C is 0.25
Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0
Total payments in to Node B is 2.2716049382716053 in round 31.
Relative Payment in to Node B from Node A is 0.181818181818182
Total dollar payment (i.e. liabilities) by Node A (i.e. p_1) is 6.993827160493828
Relative Payment in to Node B from Node C is 0.25
Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0
Total payments in to Node B is 2.2716049382716053 in round 31.
Relative Payment in to Node B from Node A is 0.181818181818182
Total dollar payment (i.e. liabilities) by Node A (i.e. p_1) is 6.993827160493828
Relative Payment in to Node B from Node C is 0.25
Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0
Total payments in to Node B is 2.2716049382716053 in round 31.
Round 31 and Node B has defaulted due to nominal obligations 16.0 being greater than cash flow 2.2716049382716053. Default loss for Node B is 0.0

- Total Dollar Payment Vector for round 31 and Node B
Total Dollar Payment Vector for round 31 and Node B updated with value
2.2716049382716053

Node C

- Total payments in for Node C
Relative Payment in to Node C from Node A is 0.8181818181818182
Total dollar payment (i.e. liabilities) by Node A (i.e. p_1) is
6.993827160493828
Relative Payment in to Node C from Node B is 0.5625
Total dollar payment (i.e. liabilities) by Node B (i.e. p_2) is
2.2716049382716053
Total payments in to Node C is 7.0000000000000001 in round 31.

- Liabilities for Node C
Liability of Node C to Node A (i.e. P_20) is 3.0
Liability of Node C to Node B (i.e. P_21) is 1.0
Total nominal liabilities for Node C (i.e. p_bar_3) is 4.0

Payment out is min[payment out, total cash flow] i.e. min[4.0, 11.0]

- Total Dollar Payment Vector for round 31 and Node C
Total Dollar Payment Vector for round 31 and Node C updated with value 4.0

TOTAL PAYMENT VECTOR - round 31

Total payment by Node A (i.e. p_1): 6.993827160493828
Total payment by Node B (i.e. p_2): 2.2716049382716053
Total payment by Node C (i.e. p_3): 4.0
[6.993827160493828, 2.2716049382716053, 4.0]

UPDATE EQUITY (i.e. BOOK VALUE) FOR EACH NODE - round 31

Node A

Total operating cash flow (exogenous assets) 3.0.
Relative Payment in to Node A from Node B is 0.4375
Total dollar payment (i.e. liabilities) by Node B (i.e. p_2) is
2.2716049382716053
Relative Payment in to Node A from Node C is 0.75
Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0
Total payments in to Node A is 3.9938271604938276 in round 31.
Total dollar payment (i.e. liabilities) by Node A (i.e. p_1) is
6.993827160493828

Equity Vector for round 31 and Node A
Equity Vector for round 31 and Node A updated with value 0.0 i.e. total cash
flow 6.993827160493828 minus total payments out (liabilities)
6.993827160493828.

Node B

Total operating cash flow (exogenous assets) 0.0.
Relative Payment in to Node B from Node A is 0.181818181818182
Total dollar payment (i.e. liabilities) by Node A (i.e. p_1) is
6.993827160493828
Relative Payment in to Node B from Node C is 0.25
Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0
Total payments in to Node B is 2.2716049382716053 in round 31.
Total dollar payment (i.e. liabilities) by Node B (i.e. p_2) is
2.2716049382716053
Equity Vector for round 31 and Node B
Equity Vector for round 31 and Node B updated with value 0.0 i.e. total cash
flow 2.2716049382716053 minus total payments out (liabilities)
2.2716049382716053.

Node C

Total operating cash flow (exogenous assets) 4.0.
Relative Payment in to Node C from Node A is 0.8181818181818182
Total dollar payment (i.e. liabilities) by Node A (i.e. p_1) is
6.993827160493828
Relative Payment in to Node C from Node B is 0.5625
Total dollar payment (i.e. liabilities) by Node B (i.e. p_2) is
2.2716049382716053
Total payments in to Node C is 7.000000000000001 in round 31.
Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0
Equity Vector for round 31 and Node C
Equity Vector for round 31 and Node C updated with value 7.0 i.e. total cash
flow 11.0 minus total payments out (liabilities) 4.0.

EQUITY FOR EACH NODE - round 31

Equity for Node A: 0.0
Equity for Node B: 0.0
Equity for Node C: 7.0
[0.0, 0.0, 7.0]

ROUND 31 DEFAULTERS

Node A has defaulted in round 31

{'A': True, 'B': True, 'C': False}

There are defaulters from earlier rounds but no new defaulters in the current round, algorithm will not proceed for another round.

Checking limited liability and absolute priority for Node A

Total dollar payment (i.e. liabilities) by Node A (i.e. p_1) is
6.993827160493828

Relative Payment in to Node A from Node B is 0.4375

Total dollar payment (i.e. liabilities) by Node B (i.e. p_2) is
2.2716049382716053

Relative Payment in to Node A from Node C is 0.75

Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0

Total payments in to Node A is 3.9938271604938276 in round 31.

- Limited liability is met. Node A made a payment of 6.993827160493828 in round 31 which is less than or equal to the cash flow (payments in + exogenous cash) of 6.993827160493828.

Total nominal obligation for Node A (i.e. p_bar_1): 11.0

Total dollar payment (i.e. liabilities) by Node A (i.e. p_1) is
6.993827160493828

Relative Payment in to Node A from Node B is 0.4375

Total dollar payment (i.e. liabilities) by Node B (i.e. p_2) is
2.2716049382716053

Relative Payment in to Node A from Node C is 0.75

Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0

Total payments in to Node A is 3.9938271604938276 in round 31.

-Checking absolute priority for Node A in round 31. Nominal obligations is 11.0 and Dollar payments is 6.993827160493828

Dollar payments less than nominal obligations. Now checking if all value is paid to creditors, i.e. Total cash flow for Node A

All value i.e. cash flow available to Node A is 6.993827160493828

-Absolute priority is satisfied for Node A

- Absolute priority is met by Node A in round 31 i.e. either obligations are paid in full or all available cash flow (i.e. sum of the payments received by the node plus the exogenous operating cash flow) is paid to creditors. Nominal obligations were 11.0, Dollar payment was 6.993827160493828 and Total cash flow was 6.993827160493828

Node A in round 31 passes candidate clearing vector payment entry checks.

Checking limited liability and absolute priority for Node B

Total dollar payment (i.e. liabilities) by Node B (i.e. p_2) is
2.2716049382716053

Relative Payment in to Node B from Node A is 0.18181818181818182

Total dollar payment (i.e. liabilities) by Node A (i.e. p_1) is 6.993827160493828

Relative Payment in to Node B from Node C is 0.25

Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0

Total payments in to Node B is 2.2716049382716053 in round 31.

- Limited liability is met. Node B made a payment of 2.2716049382716053 in round 31 which is less than or equal to the cash flow (payments in + exogenous cash) of 2.2716049382716053.

Total nominal obligation for Node B (i.e. p_bar_2): 16.0

Total dollar payment (i.e. liabilities) by Node B (i.e. p_2) is 2.2716049382716053

Relative Payment in to Node B from Node A is 0.18181818181818182

Total dollar payment (i.e. liabilities) by Node A (i.e. p_1) is 6.993827160493828

Relative Payment in to Node B from Node C is 0.25

Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0

Total payments in to Node B is 2.2716049382716053 in round 31.

-Checking absolute priority for Node B in round 31. Nominal obligations is 16.0 and Dollar payments is 2.2716049382716053

Dollar payments less than nominal obligations. Now checking if all value is paid to creditors, i.e. Total cash flow for Node B

All value i.e. cash flow available to Node B is 2.2716049382716053

-Absolute priority is satisfied for Node B

- Absolute priority is met by Node B in round 31 i.e. either obligations are paid in full or all available cash flow (i.e. sum of the payments received by the node plus the exogenous operating cash flow) is paid to creditors. Nominal obligations were 16.0, Dollar payment was 2.2716049382716053 and Total cash flow was 2.2716049382716053

Node B in round 31 passes candidate clearing vector payment entry checks.

Checking limited liability and absolute priority for Node C

Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0

Relative Payment in to Node C from Node A is 0.8181818181818182

Total dollar payment (i.e. liabilities) by Node A (i.e. p_1) is 6.993827160493828

Relative Payment in to Node C from Node B is 0.5625

Total dollar payment (i.e. liabilities) by Node B (i.e. p_2) is 2.2716049382716053

Total payments in to Node C is 7.000000000000001 in round 31.

- Limited liability is met. Node C made a payment of 4.0 in round 31 which is less than or equal to the cash flow (payments in + exogenous cash) of 11.0.

Total nominal obligation for Node C (i.e. $p_{\bar{3}}$): 4.0
Total dollar payment (i.e. liabilities) by Node C (i.e. p_3) is 4.0
Relative Payment in to Node C from Node A is 0.81818181818182
Total dollar payment (i.e. liabilities) by Node A (i.e. p_1) is
6.993827160493828
Relative Payment in to Node C from Node B is 0.5625
Total dollar payment (i.e. liabilities) by Node B (i.e. p_2) is
2.2716049382716053
Total payments in to Node C is 7.000000000000001 in round 31.

-Checking absolute priority for Node C in round 31. Nominal obligations is 4.0
and Dollar payments is 4.0

-Absolute priority is satisfied for Node C

- Absolute priority is met by Node C in round 31 i.e. either obligations are
paid in full or all available cash flow (i.e. sum of the payments received by
the node plus the exogenous operating cash flow) is paid to creditors. Nominal
obligations were 4.0, Dollar payment was 4.0 and Total cash flow was 11.0

Node C in round 31 passes candidate clearing vector payment entry checks.

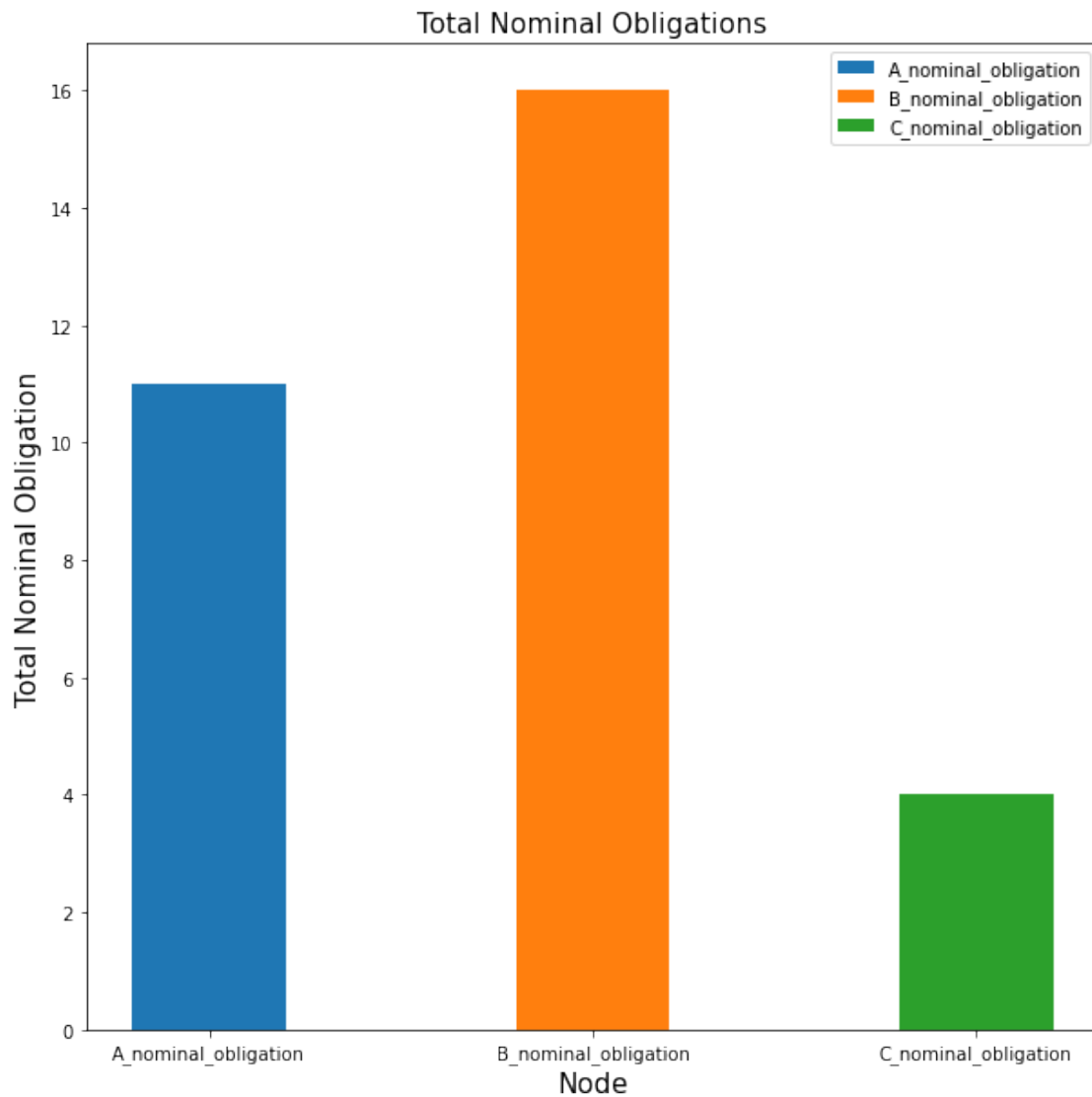
CLEARING_PAYMENT_VECTOR

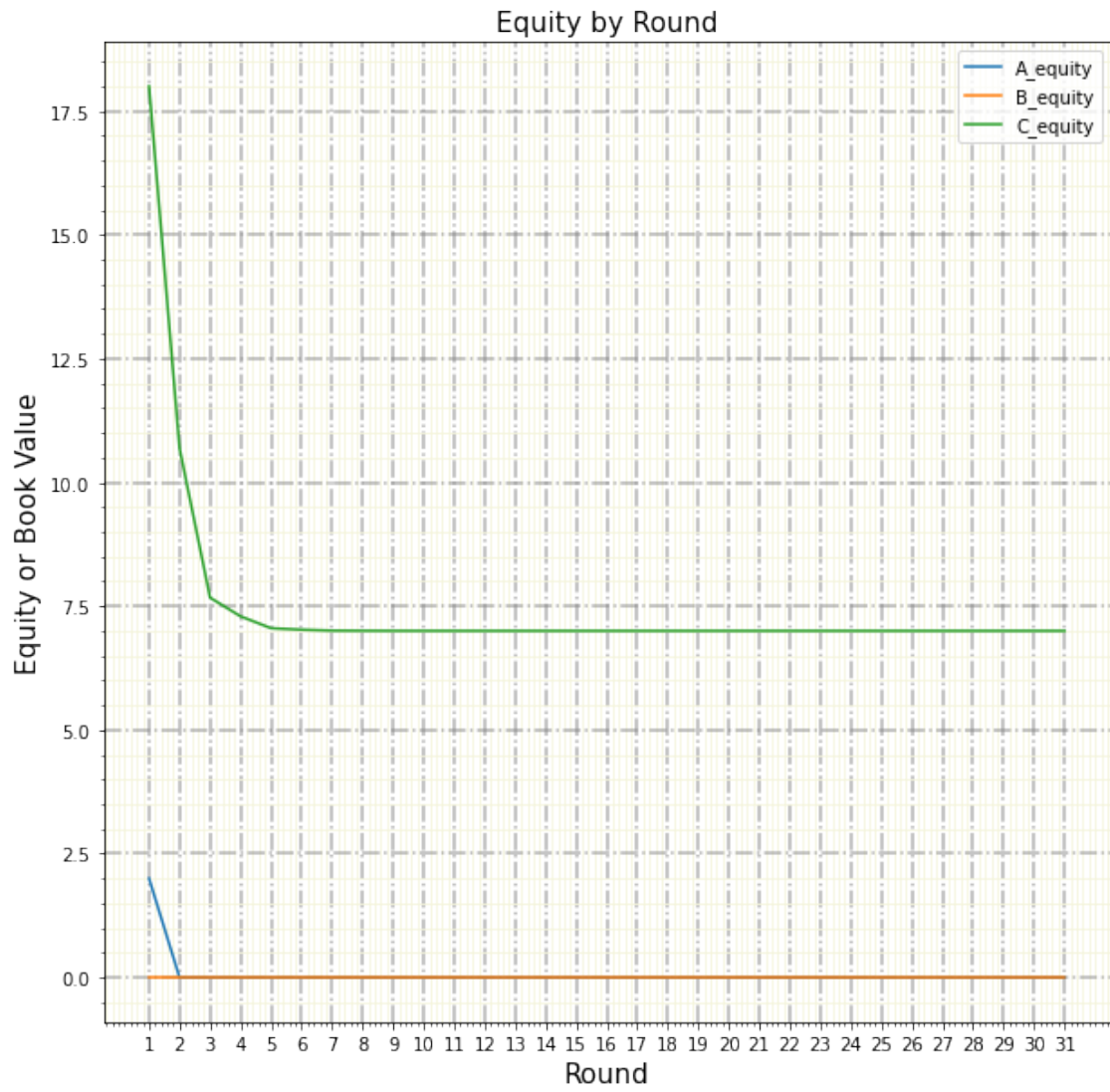
Clearing payment vector found in round 31.
[6.993827160493828, 2.2716049382716053, 4.0]
Node A pays: 6.993827160493828
Node B pays: 2.2716049382716053
Node C pays: 4.0
Default loss incurred by Node A is: 0.0
Default loss incurred by Node B is: 0.0
Default loss incurred by Node C is: 0

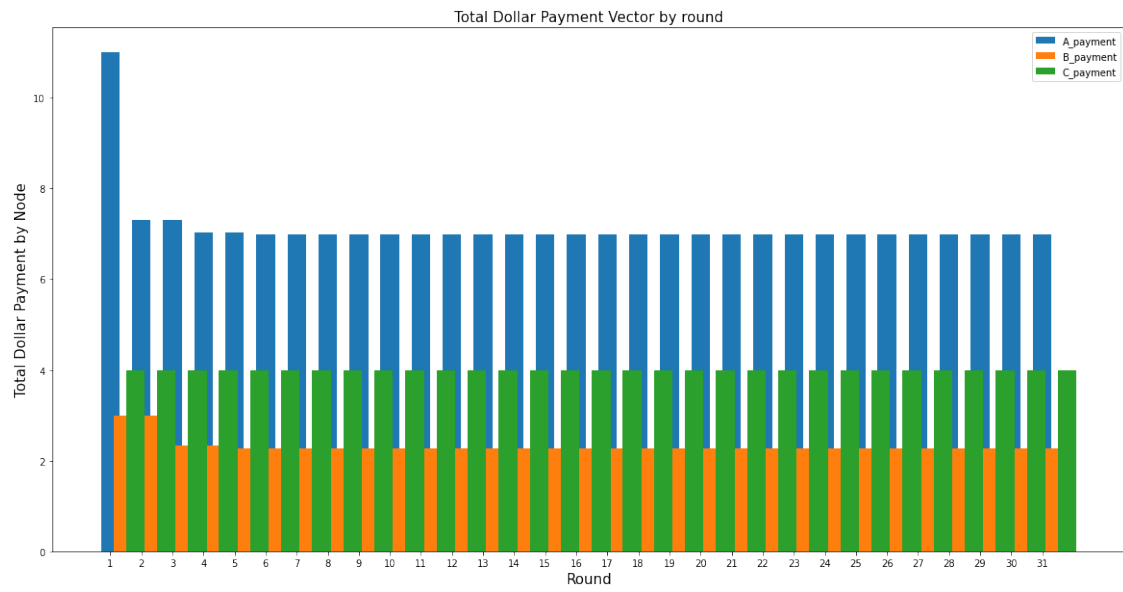
END OF ROUND 31

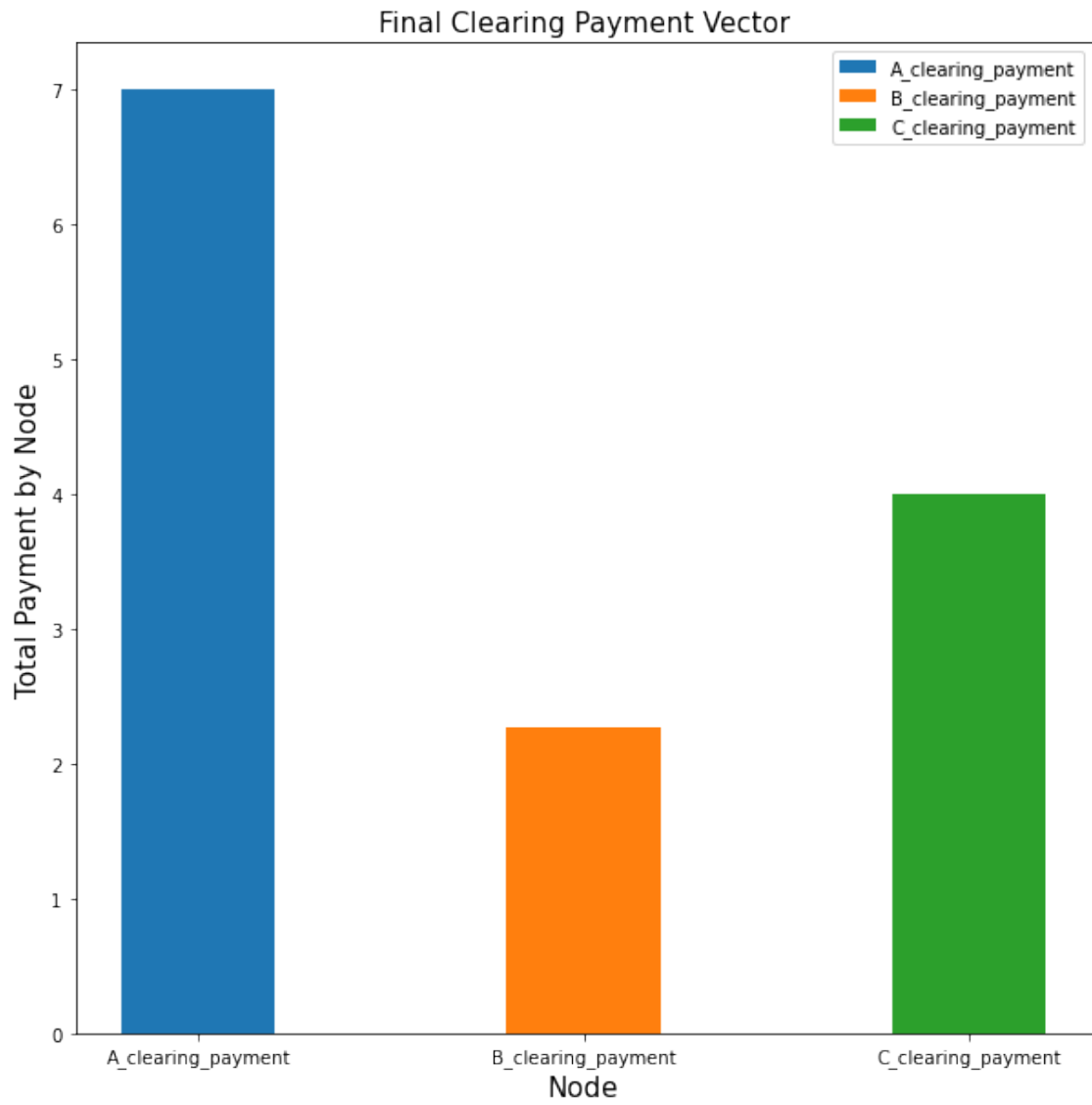
- Systemic Risk: Node B has defaulted in round 1. The number of prior default
waves is 0. There are 3 nodes in the system (0 of which have defaulted i.e. []).
- Systemic Risk: Node A has defaulted in round 2. The number of prior default
waves is 1. There are 3 nodes in the system (1 of which have defaulted i.e.
['B']).
- Systemic Risk: Node C has not defaulted after 31 rounds. There are 3 nodes in
the system (2 of which have defaulted i.e. ['B', 'A']).

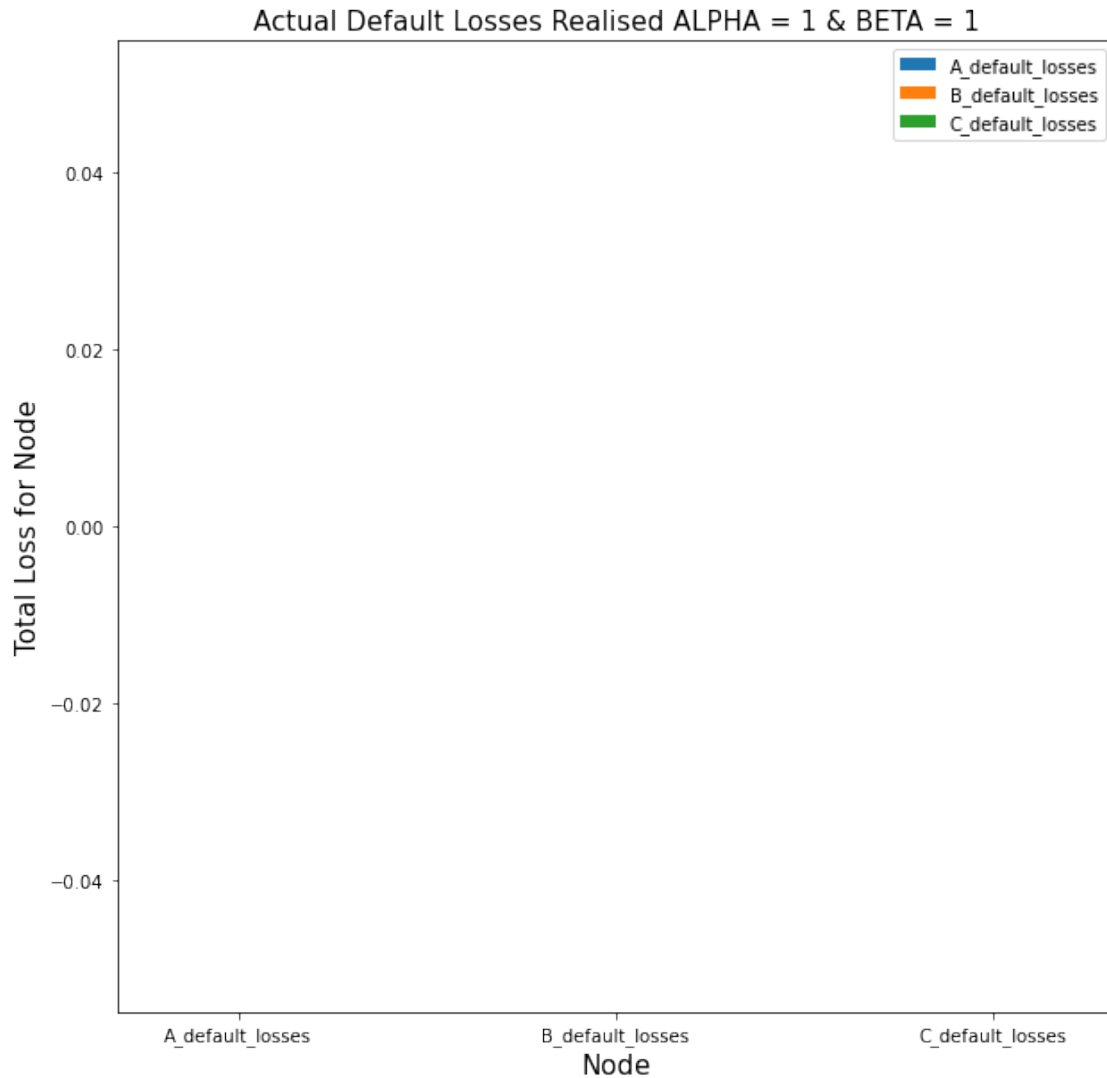
Scenario 3 - Firm B defaults in first round, Firm A in second round, algorithm terminates round 3, MODE == 'MANUAL', NUM_AGENTS = 3, NOMINAL_LIABILITY_MATRIX = np.array([[0,2,9],[7,0,9],[3,1,0]]), OPERATING_CASH_FLOW_VECTOR = [3, 0, 4], and implicitly ALPHA=BETA=1





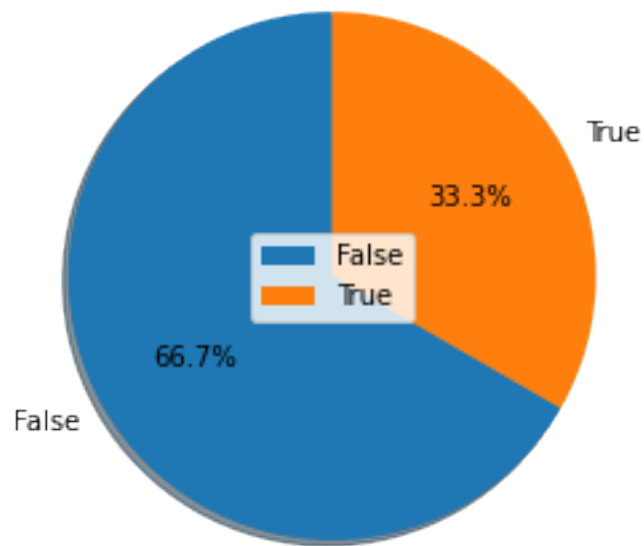






ALPHA and BETA are the fraction of exogenous assets (outside financial network) and endogenous assets (inside financial network i.e. interbank obligations) that are realised on liquidation in the event of default. The two fractions may conceivably be different; we would typically expect that ALPHA would be low, because the bank would be having to sell off its loan portfolio, probably at a knock-down price or fire sale. In contrast, BETA might be much closer to 1, because an obligation from a solvent bank would probably be paid in full (though perhaps with some negotiated discount to compensate for the inconvenience of early repayment).

Percentage of Defaulters After Round 1

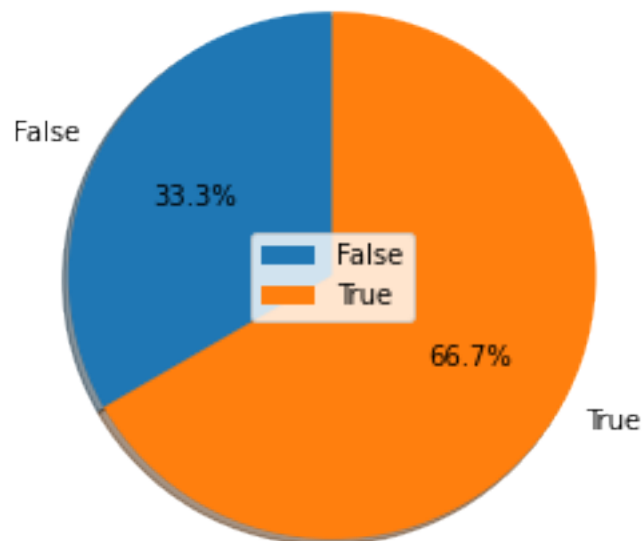


Node A has NOT defaulted in round 1

Node B has defaulted in round 1

Node C has NOT defaulted in round 1

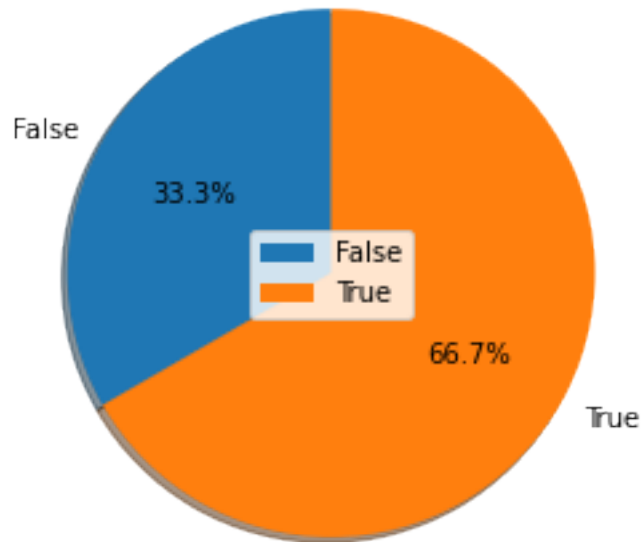
Percentage of Defaulters After Round 2



Node A has defaulted in round 2

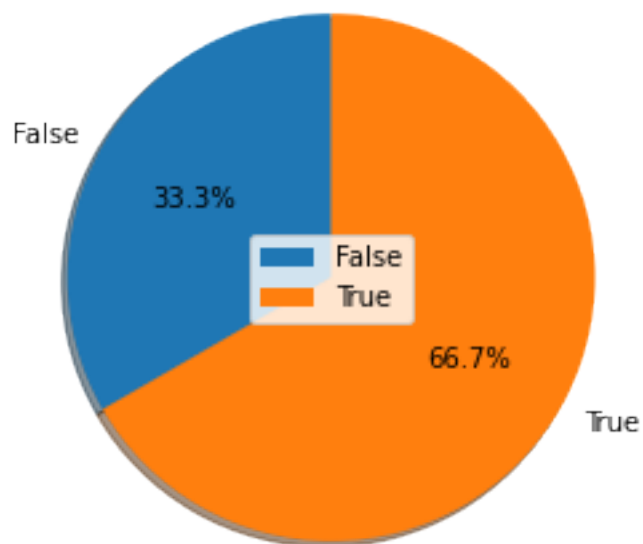
Node B has defaulted in round 2
Node C has NOT defaulted in round 2

Percentage of Defaulters After Round 3



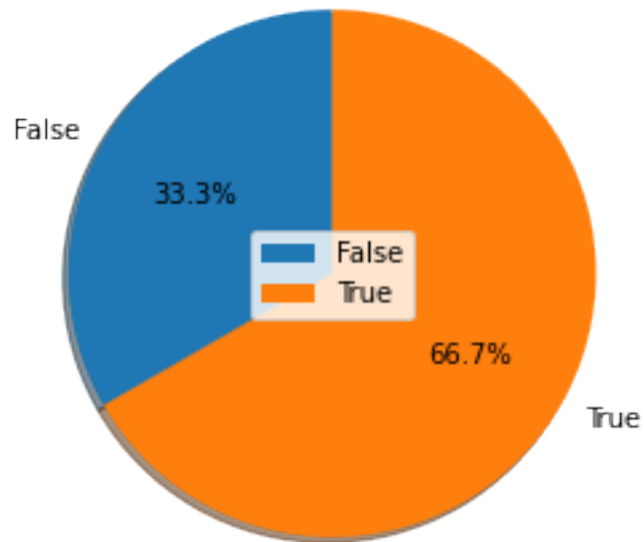
Node A has defaulted in round 3
Node B has defaulted in round 3
Node C has NOT defaulted in round 3

Percentage of Defaulters After Round 4



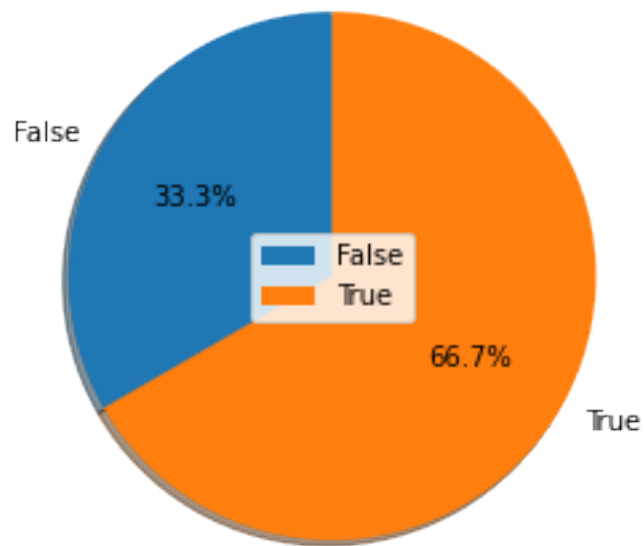
Node A has defaulted in round 4
Node B has defaulted in round 4
Node C has NOT defaulted in round 4

Percentage of Defaulters After Round 5



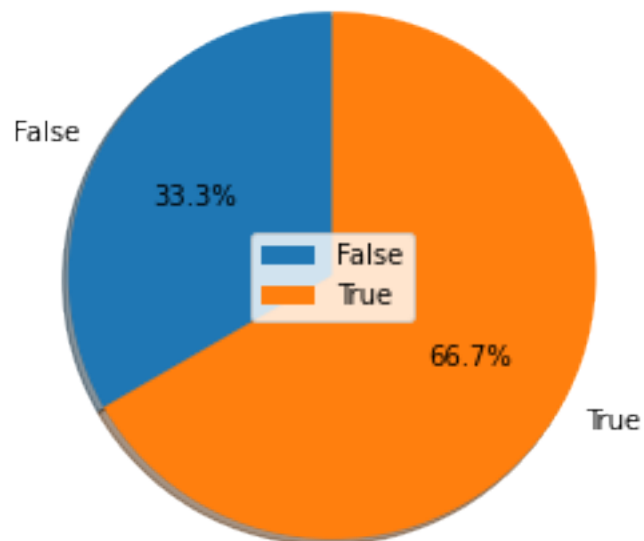
Node A has defaulted in round 5
Node B has defaulted in round 5
Node C has NOT defaulted in round 5

Percentage of Defaulters After Round 6



Node A has defaulted in round 6
Node B has defaulted in round 6
Node C has NOT defaulted in round 6

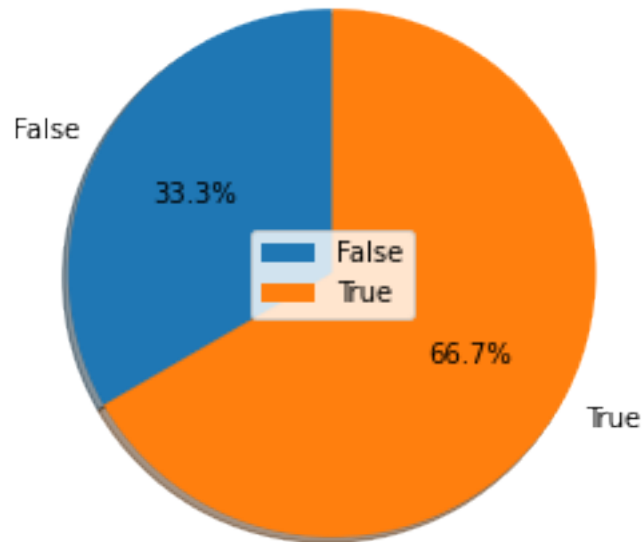
Percentage of Defaulters After Round 7



Node A has defaulted in round 7

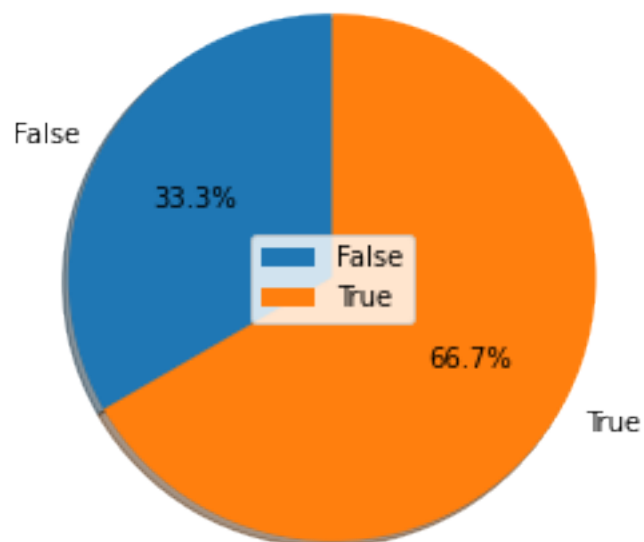
Node B has defaulted in round 7
Node C has NOT defaulted in round 7

Percentage of Defaulters After Round 8



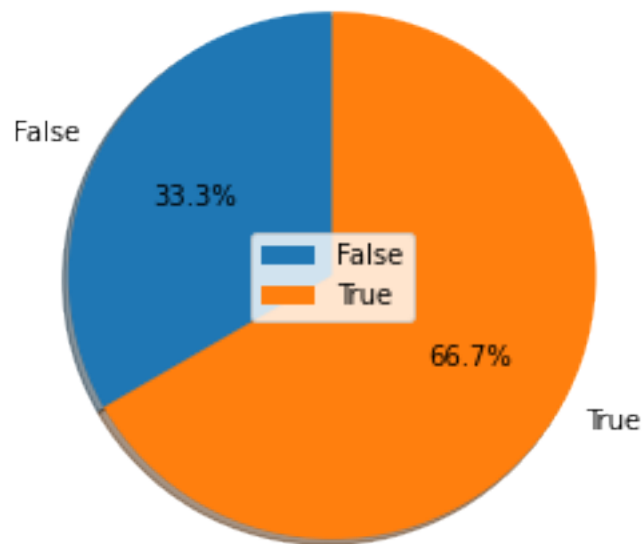
Node A has defaulted in round 8
Node B has defaulted in round 8
Node C has NOT defaulted in round 8

Percentage of Defaulters After Round 9



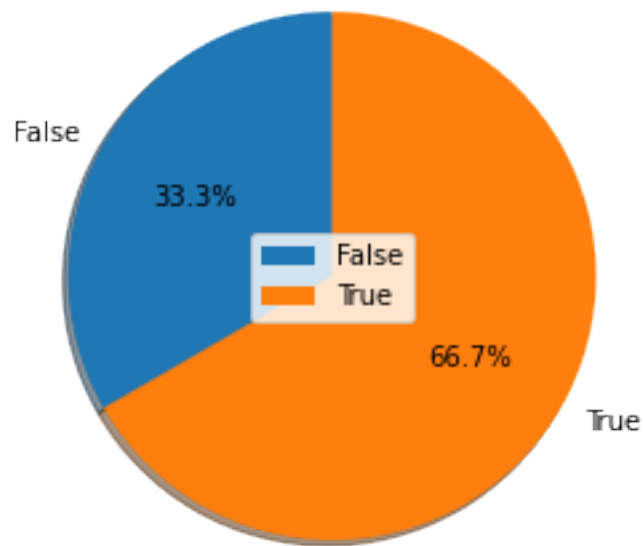
Node A has defaulted in round 9
Node B has defaulted in round 9
Node C has NOT defaulted in round 9

Percentage of Defaulters After Round 10



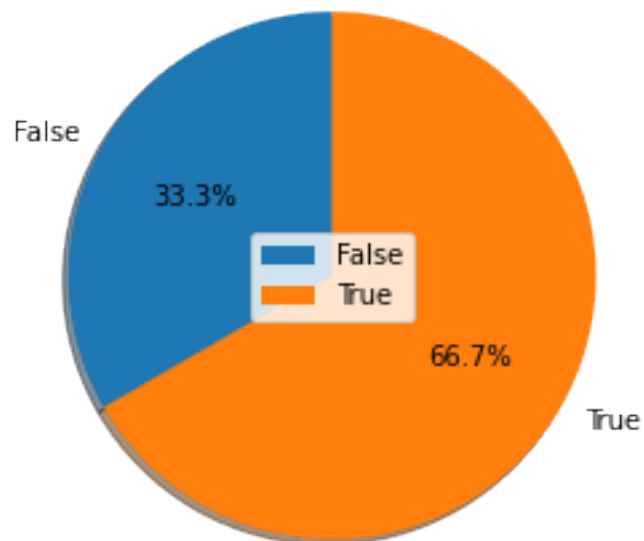
Node A has defaulted in round 10
Node B has defaulted in round 10
Node C has NOT defaulted in round 10

Percentage of Defaulters After Round 11



Node A has defaulted in round 11
Node B has defaulted in round 11
Node C has NOT defaulted in round 11

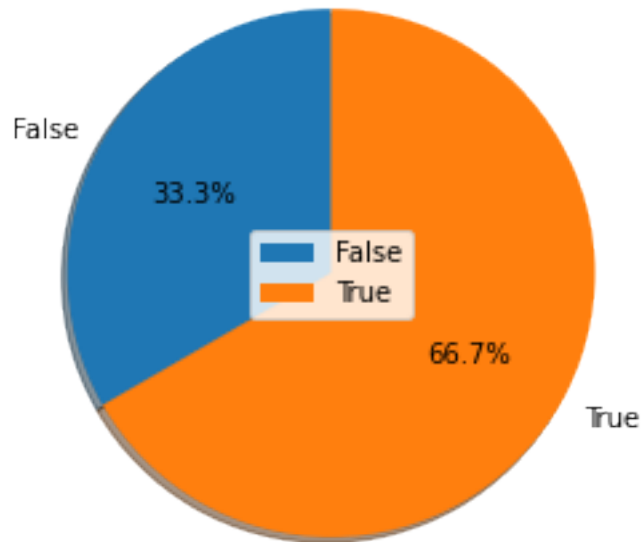
Percentage of Defaulters After Round 12



Node A has defaulted in round 12

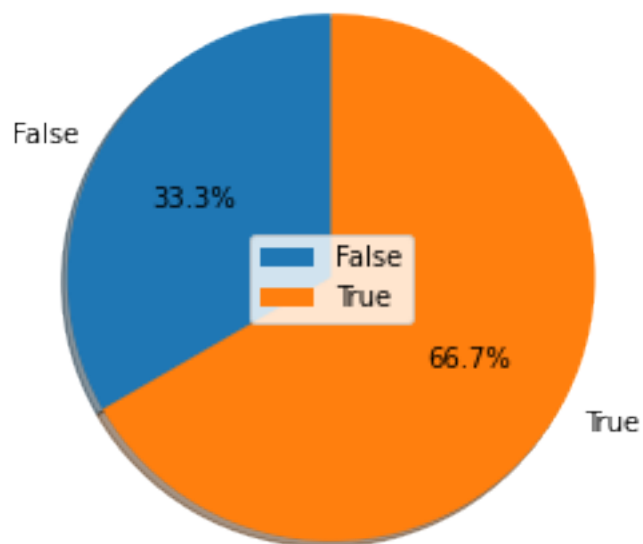
Node B has defaulted in round 12
Node C has NOT defaulted in round 12

Percentage of Defaulters After Round 13



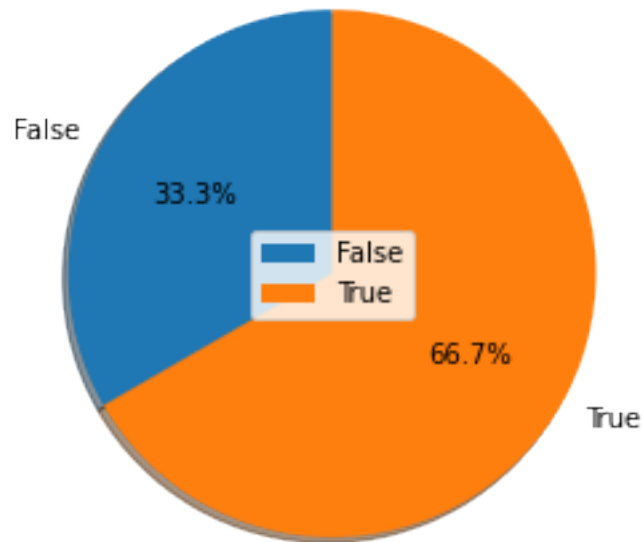
Node A has defaulted in round 13
Node B has defaulted in round 13
Node C has NOT defaulted in round 13

Percentage of Defaulters After Round 14



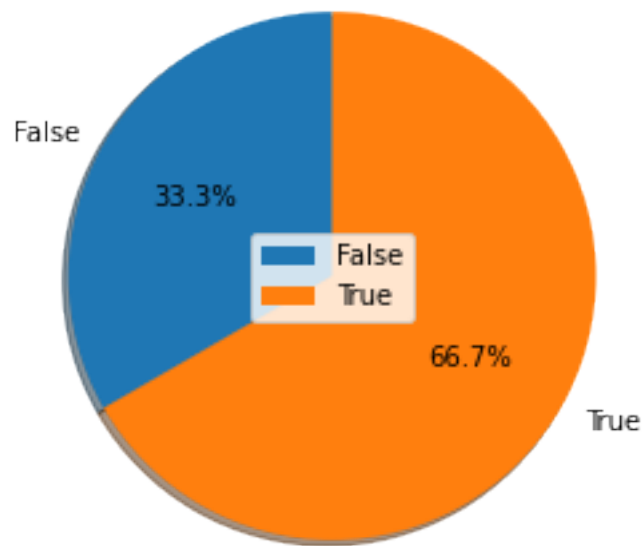
Node A has defaulted in round 14
Node B has defaulted in round 14
Node C has NOT defaulted in round 14

Percentage of Defaulters After Round 15



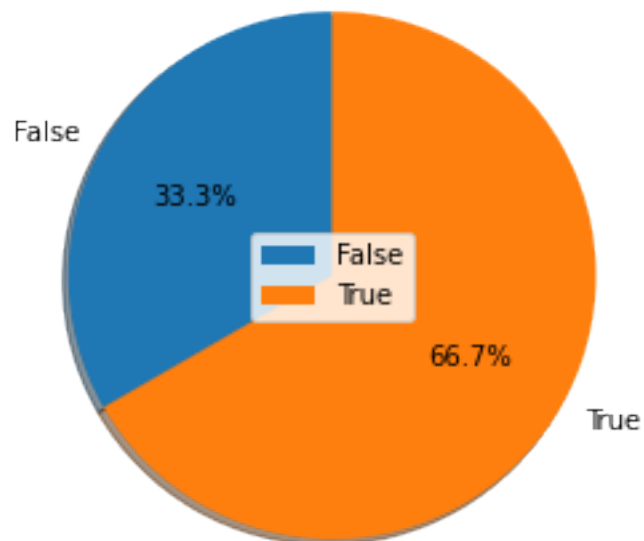
Node A has defaulted in round 15
Node B has defaulted in round 15
Node C has NOT defaulted in round 15

Percentage of Defaulters After Round 16



Node A has defaulted in round 16
Node B has defaulted in round 16
Node C has NOT defaulted in round 16

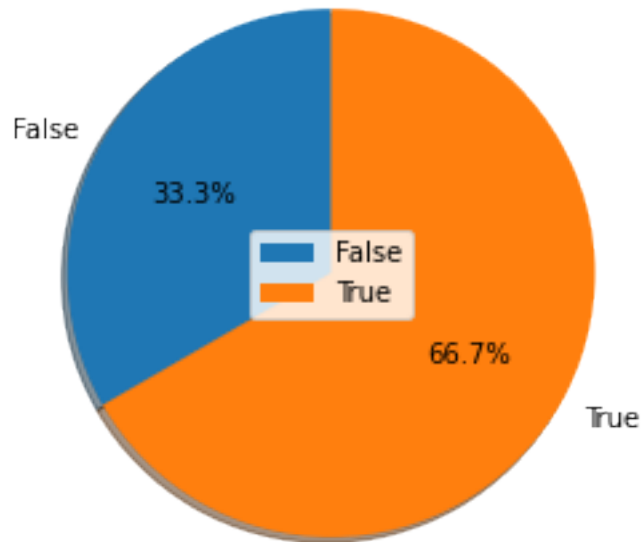
Percentage of Defaulters After Round 17



Node A has defaulted in round 17

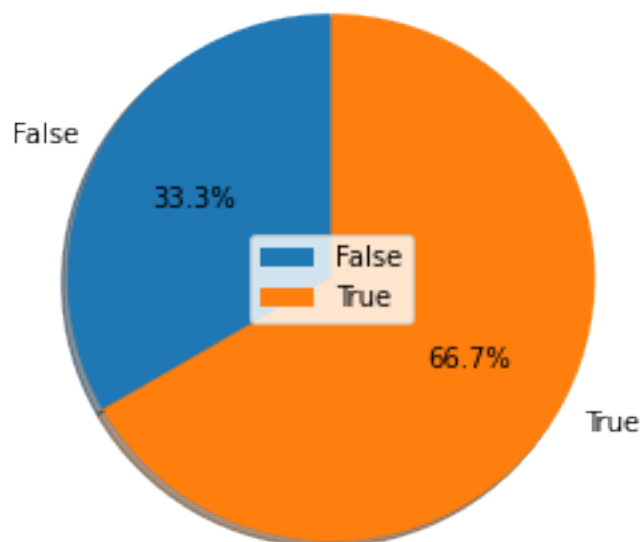
Node B has defaulted in round 17
Node C has NOT defaulted in round 17

Percentage of Defaulters After Round 18



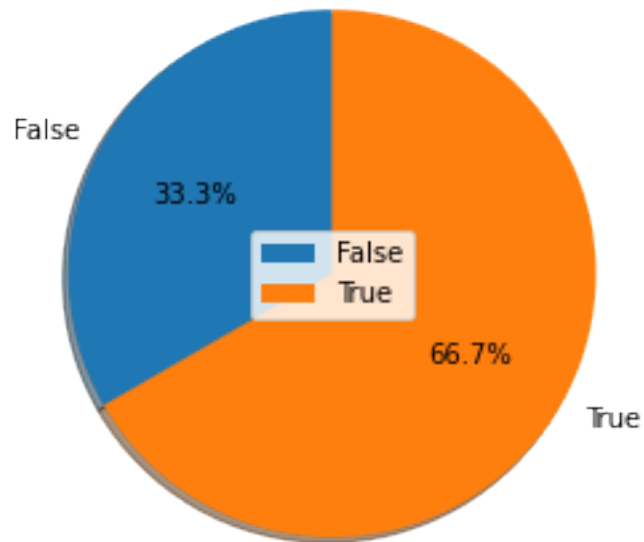
Node A has defaulted in round 18
Node B has defaulted in round 18
Node C has NOT defaulted in round 18

Percentage of Defaulters After Round 19



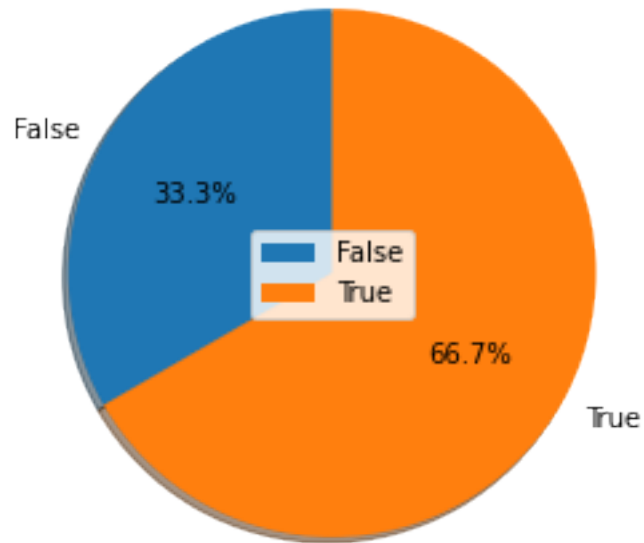
Node A has defaulted in round 19
Node B has defaulted in round 19
Node C has NOT defaulted in round 19

Percentage of Defaulters After Round 20



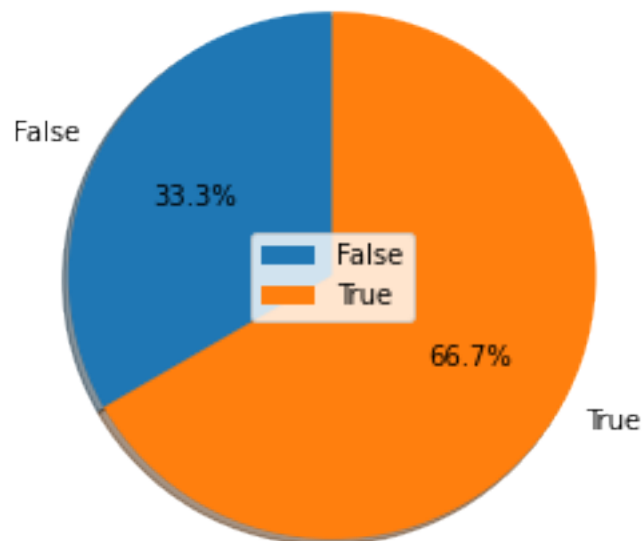
Node A has defaulted in round 20
Node B has defaulted in round 20
Node C has NOT defaulted in round 20

Percentage of Defaulters After Round 21



Node A has defaulted in round 21
Node B has defaulted in round 21
Node C has NOT defaulted in round 21

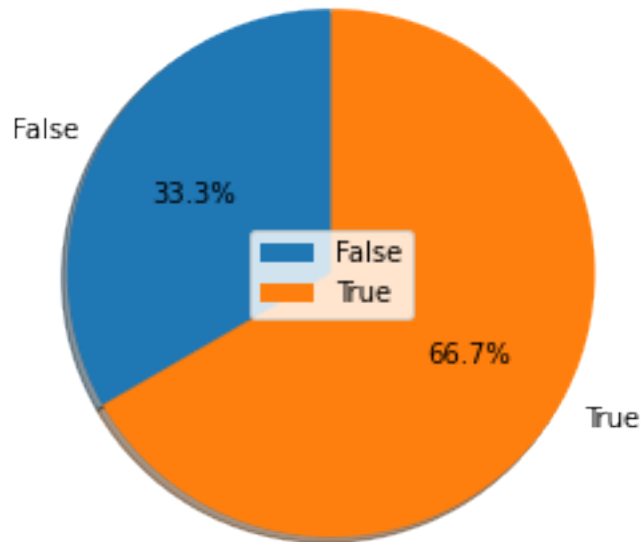
Percentage of Defaulters After Round 22



Node A has defaulted in round 22

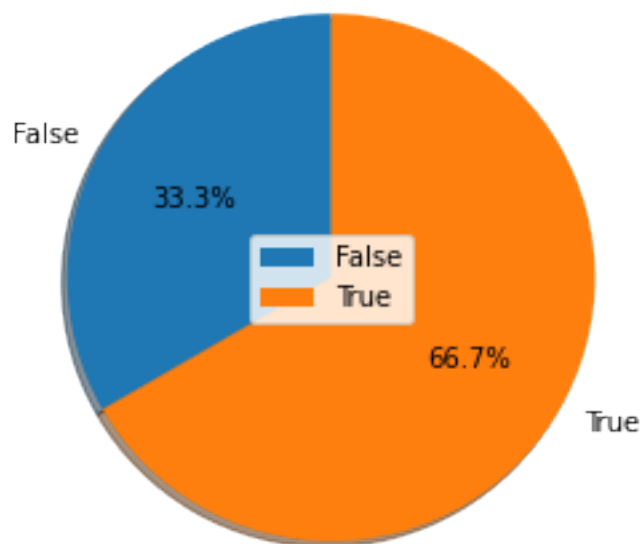
Node B has defaulted in round 22
Node C has NOT defaulted in round 22

Percentage of Defaulters After Round 23



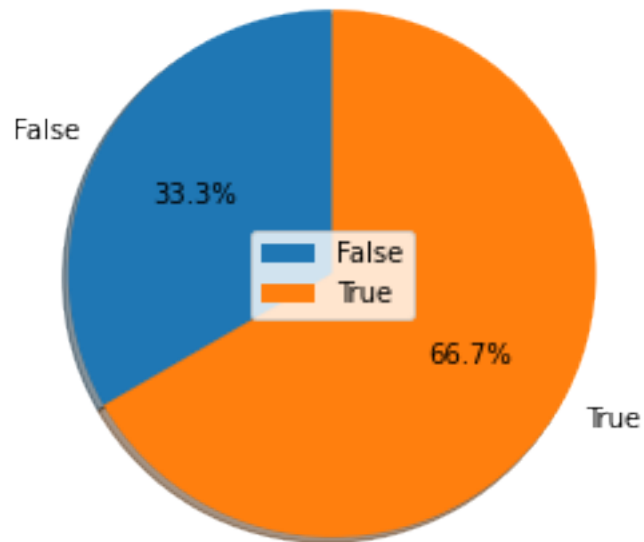
Node A has defaulted in round 23
Node B has defaulted in round 23
Node C has NOT defaulted in round 23

Percentage of Defaulters After Round 24



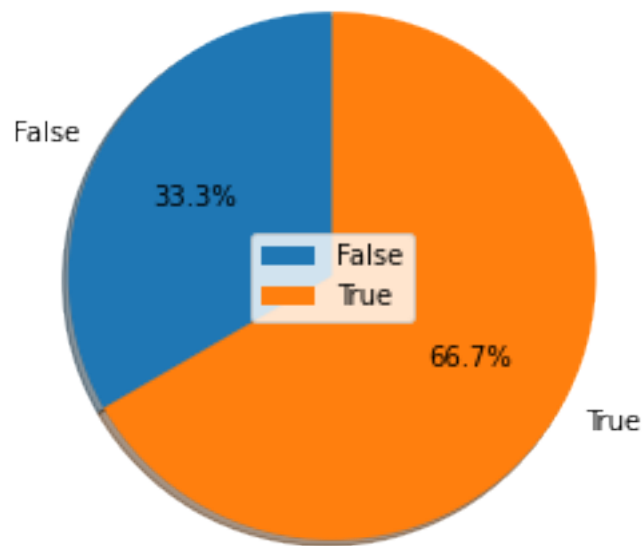
Node A has defaulted in round 24
Node B has defaulted in round 24
Node C has NOT defaulted in round 24

Percentage of Defaulters After Round 25



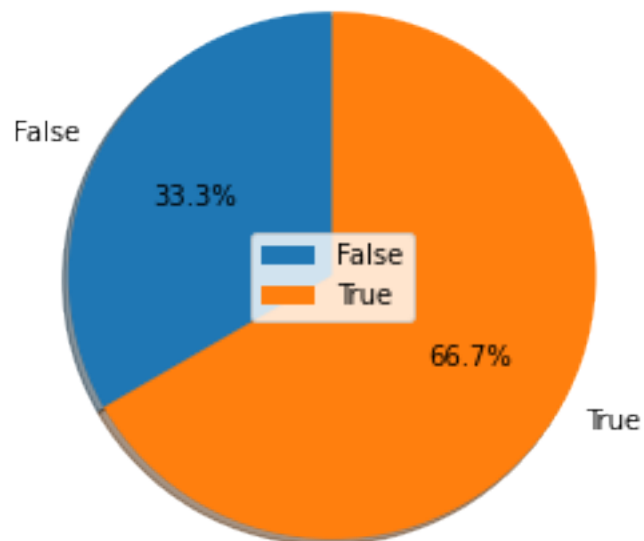
Node A has defaulted in round 25
Node B has defaulted in round 25
Node C has NOT defaulted in round 25

Percentage of Defaulters After Round 26



Node A has defaulted in round 26
Node B has defaulted in round 26
Node C has NOT defaulted in round 26

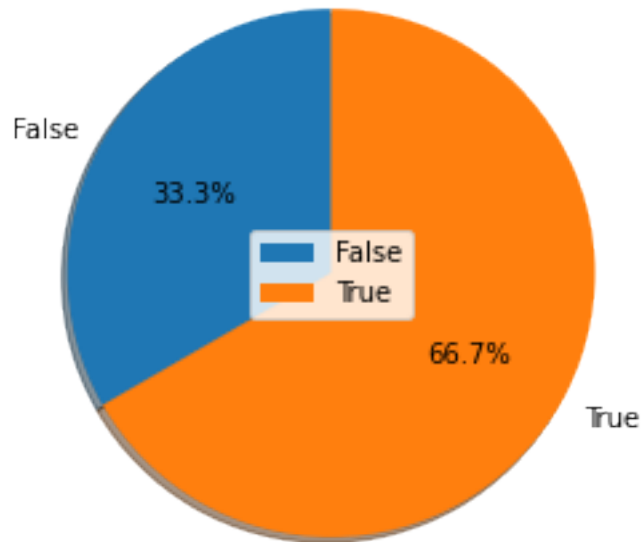
Percentage of Defaulters After Round 27



Node A has defaulted in round 27

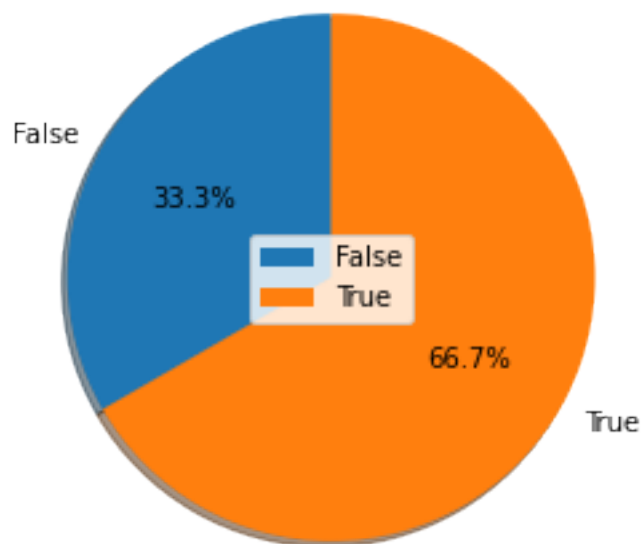
Node B has defaulted in round 27
Node C has NOT defaulted in round 27

Percentage of Defaulters After Round 28



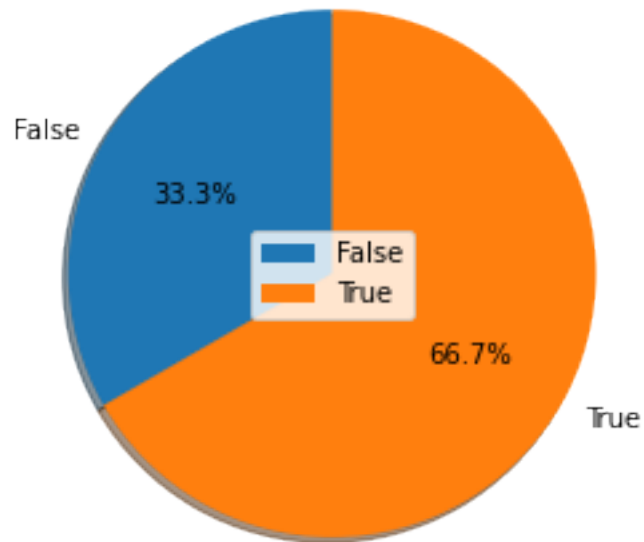
Node A has defaulted in round 28
Node B has defaulted in round 28
Node C has NOT defaulted in round 28

Percentage of Defaulters After Round 29



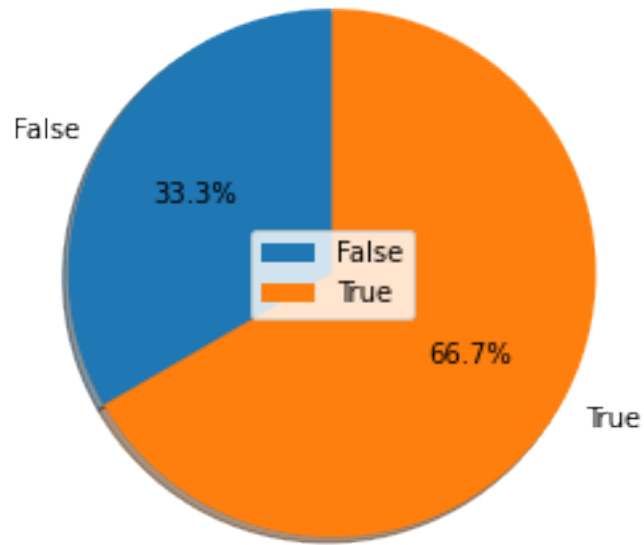
Node A has defaulted in round 29
Node B has defaulted in round 29
Node C has NOT defaulted in round 29

Percentage of Defaulters After Round 30



Node A has defaulted in round 30
Node B has defaulted in round 30
Node C has NOT defaulted in round 30

Percentage of Defaulters After Round 31



Node A has defaulted in round 31
Node B has defaulted in round 31
Node C has NOT defaulted in round 31
