

OBJEKTIVE KONTROLLER – STATISTIK FOR BETALINGER

Finansielt Stabilitet

Version 1.0

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Indledning

Efterfølgende gengives en oversigt over objektive kontroller (restriktioner), der pålægges indberetning til statistik for betalinger.

Oversigten bør læses sammen med den indberetningsvejledning til statistik for betalinger, der er målrettet den enkelte type af indberettere. I vejledningerne findes en oversigt over de enkelte indberetningskemaer med tilhørende forklaringen.

De enkelte felter er navngivet med angivelse af først række-, dernæst kolonnenummer, så 1.1/2.1 er det felt hvor række 1.1 og kolonne 2.1 skærer hinanden.

Række- og kolonnerestriktioner er pålagt henholdsvis på tværs af rækker og kolonner. Så fx rækkerestriktioner er karakteriseret ved at rækkenummeret skifter, mens kolonnenummeret er fast.

Skema: KORTPI

Række-restriktioner:

$$1.2/2.1 = 1.3/2.1 + 1.8/2.1$$

$$1.2/2.2 = 1.3/2.2 + 1.8/2.2$$

$$1.2/2.3 = 1.3/2.3 + 1.8/2.3$$

$$1.2/2.4 = 1.3/2.4 + 1.8/2.4$$

$$1.2/2.5 = 1.3/2.5 + 1.8/2.5$$

$$1.3/2.1 = 1.4/2.1 + 1.5/2.1 + 1.6/2.1 + 1.7/2.1$$

$$1.3/2.2 = 1.4/2.2 + 1.5/2.2 + 1.6/2.2 + 1.7/2.2$$

$$1.3/2.3 = 1.4/2.3 + 1.5/2.3 + 1.6/2.3 + 1.7/2.3$$

$$1.3/2.4 = 1.4/2.4 + 1.5/2.4 + 1.6/2.4 + 1.7/2.4$$

$$1.3/2.5 = 1.4/2.5 + 1.5/2.5 + 1.6/2.5 + 1.7/2.5$$

$$1.8/2.1 = 1.9/2.1 + 1.12/2.1$$

$$1.8/2.2 = 1.9/2.2 + 1.12/2.2$$

$$1.8/2.3 = 1.9/2.3 + 1.12/2.3$$

$$1.8/2.4 = 1.9/2.4 + 1.12/2.4$$

$$1.8/2.5 = 1.9/2.5 + 1.12/2.5$$

$$1.9/2.1 \geq 1.10/2.1$$

$$1.9/2.1 \geq 1.11/2.1$$

$$1.14/2.1 \geq 1.15/2.1$$

$$1.14/2.2 \geq 1.15/2.2$$

$$1.14/2.3 \geq 1.15/2.3$$

$$1.14/2.6 \geq 1.15/2.6$$

$$1.14/2.7 \geq 1.15/2.7$$

$$1.14/2.8 \geq 1.15/2.8$$

$$1.14/2.1 \geq 1.16/2.1$$

$$1.14/2.2 \geq 1.16/2.2$$

$$1.14/2.3 \geq 1.16/2.3$$

$$1.14/2.6 \geq 1.16/2.6$$

$$1.14/2.7 \geq 1.16/2.7$$

$$1.14/2.8 \geq 1.16/2.8$$

$$1.17/2.1 \geq 1.18/2.1$$

$$1.17/2.2 \geq 1.18/2.2$$

$$1.17/2.3 \geq 1.18/2.3$$

$$1.17/2.4 \geq 1.18/2.4$$

$$1.17/2.5 \geq 1.18/2.5$$

$$1.17/2.8 \geq 1.18/2.8$$

$$1.17/2.9 \geq 1.18/2.9$$

$$1.17/2.10 \geq 1.18/2.10$$

$$1.17/2.1 \geq 1.19/2.1$$

$$1.17/2.2 \geq 1.19/2.2$$

$$1.17/2.3 \geq 1.19/2.3$$

$$1.17/2.4 \geq 1.19/2.4$$

$$1.17/2.5 \geq 1.19/2.5$$

$$1.17/2.9 \geq 1.19/2.9$$

$$1.17/2.10 \geq 1.19/2.10$$

$$\text{Hvis } 1.13/2.6 + 1.13/2.7 > 0 \text{ så } 1.13/2.8 > 0$$

$$\text{Hvis } 1.14/2.6 + 1.14/2.7 > 0 \text{ så } 1.14/2.8 > 0$$

$$\text{Hvis } 1.15/2.6 + 1.15/2.7 > 0 \text{ så } 1.15/2.8 > 0$$

$$\text{Hvis } 1.16/2.6 + 1.16/2.7 > 0 \text{ så } 1.16/2.8 > 0$$

$$\text{Hvis } 1.17/2.9 + 1.17/2.10 > 0 \text{ så } 1.17/2.8 > 0$$

$$\text{Hvis } 1.18/2.9 + 1.18/2.10 > 0 \text{ så } 1.18/2.8 > 0$$

$$\text{Hvis } 1.19/2.9 + 1.19/2.10 > 0 \text{ så } 1.19/2.8 > 0$$

Kolonne-restriktioner

$$1.2/2.1 = 1.2/2.2 + 1.2/2.3$$

$$1.2/2.1 = 1.2/2.4 + 1.2/2.5$$

$$1.3/2.1 = 1.3/2.2 + 1.3/2.3$$

$$1.3/2.1 = 1.3/2.4 + 1.3/2.5$$

$$1.4/2.1 = 1.4/2.2 + 1.4/2.3$$

$$1.4/2.1 = 1.4/2.4 + 1.4/2.5$$

$$1.5/2.1 = 1.5/2.2 + 1.5/2.3$$

$$1.5/2.1 = 1.5/2.4 + 1.5/2.5$$

$$1.6/2.1 = 1.6/2.2 + 1.6/2.3$$

$$1.6/2.1 = 1.6/2.4 + 1.6/2.5$$

$$1.7/2.1 = 1.7/2.2 + 1.7/2.3$$

$$1.7/2.1 = 1.7/2.4 + 1.7/2.5$$

$$1.8/2.1 = 1.8/2.2 + 1.8/2.3$$

$$1.8/2.1 = 1.8/2.4 + 1.8/2.5$$

$$1.9/2.1 = 1.9/2.2 + 1.9/2.3$$

$$1.9/2.1 = 1.9/2.4 + 1.9/2.5$$

$$1.12/2.1 = 1.12/2.2 + 1.12/2.3$$

$$1.12/2.1 = 1.12/2.4 + 1.12/2.5$$

$$1.13/2.1 = 1.13/2.2 + 1.13/2.3$$

$$1.13/2.1 = 1.13/2.6 + 1.13/2.7$$

$$1.14/2.1 = 1.14/2.2 + 1.14/2.3$$

$$1.14/2.1 = 1.14/2.6 + 1.14/2.7$$

$$1.15/2.1 = 1.15/2.2 + 1.15/2.3$$

$$1.15/2.1 = 1.15/2.6 + 1.15/2.7$$

$$1.16/2.1 = 1.16/2.2 + 1.16/2.3$$

$$1.16/2.1 = 1.16/2.6 + 1.16/2.7$$

$$1.17/2.1 = 1.17/2.2 + 1.17/2.3$$

$$1.17/2.1 = 1.17/2.4 + 1.17/2.5$$

$$1.17/2.1 = 1.17/2.9 + 1.17/2.10$$

$$1.18/2.1 = 1.18/2.2 + 1.18/2.3$$

$$1.18/2.1 = 1.18/2.4 + 1.18/2.5$$

$$1.18/2.1 = 1.18/2.9 + 1.18/2.10$$

$$1.19/2.1 = 1.19/2.2 + 1.19/2.3$$

$$1.19/2.1 = 1.19/2.4 + 1.19/2.5$$

$$1.19/2.1 = 1.19/2.9 + 1.19/2.10$$

Skema: ATM

Række-restriktioner

$$1.1/2.1 \geq 1.2/2.1$$

$$1.1/2.1 \geq 1.3/2.1$$

$$1.1/2.1 \geq 1.4/2.1$$

Kolonne-restriktioner

Ingen.

Skema: HIPla og HIPIb

Række-restriktioner

$$1.1/2.1 = 1.2/2.1 + 1.3/2.1$$

$$1.1/2.2 = 1.2/2.2 + 1.3/2.2$$

$$1.1/2.3 = 1.2/2.3 + 1.3/2.3$$

$$1.4/2.1 = 1.5/2.1 + 1.6/2.1 + 1.7/2.1$$

$$1.4/2.2 = 1.5/2.2 + 1.6/2.2 + 1.7/2.2$$

$$1.4/2.3 = 1.7/2.3$$

Kolonne-restriktioner

$$1.1/2.1 = 1.1/2.2 + 1.1/2.3$$

$$1.2/2.1 = 1.2/2.2 + 1.2/2.3$$

$$1.3/2.1 = 1.3/2.2 + 1.3/2.3$$

$$1.4/2.1 = 1.4/2.2 + 1.4/2.3$$

$$1.5/2.1 = 1.5/2.2$$

$$1.6/2.1 = 1.6/2.2$$

$$1.7/2.1 = 1.7/2.2 + 1.7/2.3$$

Skema: TKORTPIa og TKORTPIb

Række-restriktioner

$$1.2/2.1 = 1.3/2.1 + 1.8/2.1$$

$$1.2/2.2 = 1.3/2.2 + 1.8/2.2$$

$$1.2/2.3 = 1.3/2.3 + 1.8/2.3$$

$$1.2/2.4 = 1.3/2.4 + 1.8/2.4$$

$$1.2/2.5 = 1.3/2.5 + 1.8/2.5$$

$$1.2/2.6 = 1.3/2.6 + 1.8/2.6$$

$$1.2/2.7 = 1.3/2.7 + 1.8/2.7$$

$$1.2/2.8 = 1.3/2.8 + 1.8/2.8$$

$$1.2/2.9 = 1.3/2.9 + 1.8/2.9$$

$$1.2/2.10 = 1.3/2.10 + 1.8/2.10$$

$$1.2/2.11 = 1.3/2.11 + 1.8/2.11$$

$$1.2/2.12 = 1.3/2.12 + 1.8/2.12$$

$$1.2/2.13 = 1.3/2.13 + 1.8/2.13$$

$$1.3/2.1 = 1.4/2.1 + 1.5/2.1 + 1.6/2.1 + 1.7/2.1$$

$$1.3/2.2 = 1.4/2.2 + 1.5/2.2 + 1.6/2.2 + 1.7/2.2$$

$$1.3/2.3 = 1.4/2.3 + 1.5/2.3 + 1.6/2.3 + 1.7/2.3$$

$$1.3/2.4 = 1.4/2.4 + 1.5/2.4 + 1.6/2.4 + 1.7/2.4$$

$$1.3/2.5 = 1.4/2.5 + 1.5/2.5 + 1.6/2.5 + 1.7/2.5$$

$$1.3/2.6 = 1.4/2.6 + 1.5/2.6 + 1.6/2.6 + 1.7/2.6$$

$$1.3/2.7 = 1.4/2.7 + 1.5/2.7 + 1.6/2.7 + 1.7/2.7$$

$$1.3/2.8 = 1.4/2.8 + 1.5/2.8 + 1.6/2.8 + 1.7/2.8$$

$$1.3/2.9 = 1.5/2.9 + 1.6/2.9 + 1.7/2.9$$

$$1.3/2.10 = 1.5/2.10 + 1.6/2.10 + 1.7/2.10$$

$$1.3/2.11 = 1.5/2.11 + 1.6/2.11 + 1.7/2.11$$

$$1.3/2.12 = 1.4/2.12 + 1.5/2.12 + 1.6/2.12 + 1.7/2.12$$

$$1.3/2.13 = 1.4/2.13 + 1.5/2.13 + 1.6/2.13 + 1.7/2.13$$

$$1.8/2.1 = 1.9/2.1 + 1.12/2.1$$

$$1.8/2.2 = 1.9/2.2 + 1.12/2.2$$

$$1.8/2.3 = 1.9/2.3 + 1.12/2.3$$

$$1.8/2.4 = 1.9/2.4 + 1.12/2.4$$

$$1.8/2.5 = 1.9/2.5 + 1.12/2.5$$

$$1.8/2.6 = 1.9/2.6 + 1.12/2.6$$

$$1.8/2.7 = 1.9/2.7 + 1.12/2.7$$

$$1.8/2.8 = 1.9/2.8 + 1.12/2.8$$

$$1.8/2.9 = 1.9/2.9$$

$$1.8/2.10 = 1.9/2.10$$

$$1.8/2.11 = 1.9/2.11$$

$$1.8/2.12 = 1.9/2.12 + 1.12/2.12$$

$$1.8/2.13 = 1.9/2.13 + 1.12/2.13$$

$1.9/2.1 \geq 1.10/2.1$
 $1.9/2.1 \geq 1.11/2.1$
 $1.14/2.1 \geq 1.15/2.1$
 $1.14/2.1 \geq 1.16/2.1$
 $1.17/2.1 \geq 1.18/2.1$
 $1.17/2.12 \geq 1.18/2.12$
 $1.17/2.13 \geq 1.18/2.13$
 $1.17/2.14 \geq 1.18/2.14$
 $1.17/2.15 \geq 1.18/2.15$
 $1.17/2.1 \geq 1.19/2.1$
 $1.17/2.12 \geq 1.19/2.12$
 $1.17/2.13 \geq 1.19/2.13$
 $1.17/2.14 \geq 1.19/2.14$
 $1.17/2.15 \geq 1.19/2.15$

Kolonne-restriktion

$1.1/2.1 = 1.1/2.5$
 $1.2/2.1 = 1.2/2.2 + 1.2/2.3 + 1.2/2.4 + 1.2/2.5 + 1.2/2.9 + 1.2/2.10 + 1.2/2.11$
 $1.2/2.7 = 1.2/2.2 + 1.2/2.4 - 1.2/2.8$
 $1.2/2.8 = 1.2/2.2 + 1.2/2.4 - 1.2/2.7$
 $1.2/2.1 = 1.2/2.12 + 1.2/2.13$
 $1.3/2.1 = 1.3/2.2 + 1.3/2.3 + 1.3/2.4 + 1.3/2.5 + 1.3/2.9 + 1.3/2.10 + 1.3/2.11$
 $1.3/2.7 = 1.3/2.2 + 1.3/2.4 - 1.3/2.8$
 $1.3/2.8 = 1.3/2.2 + 1.3/2.4 - 1.3/2.7$
 $1.3/2.1 = 1.3/2.12 + 1.3/2.13$
 $1.4/2.1 = 1.4/2.2 + 1.4/2.3 + 1.4/2.4 + 1.4/2.5$
 $1.4/2.7 = 1.4/2.2 + 1.4/2.4 - 1.4/2.8$
 $1.4/2.8 = 1.4/2.2 + 1.4/2.4 - 1.4/2.7$
 $1.4/2.1 = 1.4/2.12 + 1.4/2.13$
 $1.5/2.1 = 1.5/2.2 + 1.5/2.3 + 1.5/2.4 + 1.5/2.5 + 1.5/2.9 + 1.5/2.10 + 1.5/2.11$
 $1.5/2.7 = 1.5/2.2 + 1.5/2.4 - 1.5/2.8$
 $1.5/2.8 = 1.5/2.2 + 1.5/2.4 - 1.5/2.7$
 $1.5/2.1 = 1.5/2.12 + 1.5/2.13$
 $1.6/2.1 = 1.6/2.2 + 1.6/2.3 + 1.6/2.4 + 1.6/2.5 + 1.6/2.9 + 1.6/2.10 + 1.6/2.11$
 $1.6/2.7 = 1.6/2.2 + 1.6/2.4 - 1.6/2.8$
 $1.6/2.8 = 1.6/2.2 + 1.6/2.4 - 1.6/2.7$
 $1.6/2.1 = 1.6/2.12 + 1.6/2.13$
 $1.7/2.1 = 1.7/2.2 + 1.7/2.3 + 1.7/2.4 + 1.7/2.5 + 1.7/2.9 + 1.7/2.10 + 1.7/2.11$
 $1.7/2.7 = 1.7/2.2 + 1.7/2.4 - 1.7/2.8$
 $1.7/2.8 = 1.7/2.2 + 1.7/2.4 - 1.7/2.7$
 $1.7/2.1 = 1.7/2.12 + 1.7/2.13$
 $1.8/2.1 = 1.8/2.2 + 1.8/2.3 + 1.8/2.4 + 1.8/2.5 + 1.8/2.9 + 1.8/2.10 + 1.8/2.11$

$$1.8/2.7 = 1.8/2.2 + 1.8/2.4 - 1.8/2.8$$

$$1.8/2.8 = 1.8/2.2 + 1.8/2.4 - 1.8/2.7$$

$$1.8/2.1 = 1.8/2.12 + 1.8/2.13$$

$$1.9/2.1 = 1.9/2.2 + 1.9/2.3 + 1.9/2.4 + 1.9/2.5 + 1.9/2.9 + 1.9/2.10 + 1.9/2.11$$

$$1.9/2.7 = 1.9/2.2 + 1.9/2.4 - 1.9/2.8$$

$$1.9/2.8 = 1.9/2.2 + 1.9/2.4 - 1.9/2.7$$

$$1.9/2.1 = 1.9/2.12 + 1.9/2.13$$

$$1.12/2.1 = 1.12/2.2 + 1.12/2.3 + 1.12/2.4 + 1.12/2.5$$

$$1.12/2.7 = 1.12/2.2 + 1.12/2.4 - 1.12/2.8$$

$$1.12/2.8 = 1.12/2.2 + 1.12/2.4 - 1.12/2.7$$

$$1.12/2.1 = 1.12/2.12 + 1.12/2.13$$

$$1.13/2.1 = 1.13/2.2 + 1.13/2.3 + 1.13/2.4 + 1.13/2.5$$

$$1.13/2.7 = 1.13/2.2 + 1.13/2.4 - 1.13/2.8$$

$$1.13/2.8 = 1.13/2.2 + 1.13/2.4 - 1.13/2.7$$

$$1.17/2.1 = 1.17/2.12 + 1.17/2.13$$

$$1.17/2.1 = 1.17/2.14 + 1.17/2.15$$

$$1.18/2.1 = 1.18/2.12 + 1.18/2.13$$

$$1.18/2.1 = 1.18/2.14 + 1.18/2.15$$

$$1.19/2.1 = 1.19/2.12 + 1.19/2.13$$

$$1.19/2.1 = 1.19/2.14 + 1.19/2.15$$

$$1.2/2.6 \leq 1.2/2.2 + 1.2/2.4$$

$$1.3/2.6 \leq 1.3/2.2 + 1.3/2.4$$

$$1.4/2.6 \leq 1.4/2.2 + 1.4/2.4$$

$$1.5/2.6 \leq 1.5/2.2 + 1.5/2.4$$

$$1.6/2.6 \leq 1.6/2.2 + 1.6/2.4$$

$$1.7/2.6 \leq 1.7/2.2 + 1.7/2.4$$

$$1.8/2.6 \leq 1.8/2.2 + 1.8/2.4$$

$$1.9/2.6 \leq 1.9/2.2 + 1.9/2.4$$

$$1.12/2.6 \leq 1.12/2.2 + 1.12/2.4$$

$$1.13/2.6 \leq 1.13/2.2 + 1.13/2.4$$

Skema: TUKORTa og TUKORTb

Række-restriktioner

$$1.1/2.1 = 1.2/2.1 + 1.3/2.1$$

$$1.1/2.2 = 1.2/2.2 + 1.3/2.2$$

$$1.1/2.3 = 1.2/2.3 + 1.3/2.3$$

$$1.1/2.4 = 1.2/2.4 + 1.3/2.4$$

$$1.1/2.5 = 1.2/2.5 + 1.3/2.5$$

Kolonne-restriktioner

$$1.1/2.1 = 1.1/2.2 + 1.1/2.3 + 1.1/2.4 + 1.1/2.5$$

$$1.2/2.1 = 1.2/2.2 + 1.2/2.3 + 1.2/2.4 + 1.2/2.5$$

$$1.3/2.1 = 1.3/2.2 + 1.3/2.3 + 1.3/2.4 + 1.3/2.5$$

Skema: TMOBILa og TMOBILb

Række-restriktioner

Ingen.

Kolonne-restriktioner

Det er ikke muligt at pålægge restriktioner for den samlede indberetning, men det er muligt for de underliggende tjenester, for hvilke der skal indberettes oplysninger for.

MobilePay:

$$1.1/2.1 = 1.1/2.2$$

$$1.1/2.2 = 1.1/2.3 + 1.1/2.4 + 1.1/2.5 + 1.1/2.6$$

Danske Netbetaling og eDankort:

$$1.2/2.1 = 1.2/2.2$$

$$1.2/2.2 = 1.2/2.4$$

Swipp:

$$1.2/2.2 = 1.2/2.3 + 1.2/2.4 + 1.2/2.5 + 1.2/2.6$$

Kontaktløs kortbetaling via wallet-løsning via kortinfrastruktur:

$$1.1/2.1 = 1.1/2.3 + 1.1/2.4 + 1.2/2.5 + 1.1/2.5 + 1.2/2.6^*$$

*Hvis det på sigt bliver muligt at lave P2P-overførsler

Skema: TKOa og TKOb

Række-restriktioner

$$1.1/2.1 = 1.2/2.1 + 1.5/2.1$$

$$1.1/2.2 = 1.2/2.2 + 1.5/2.2$$

$$1.1/2.3 = 1.2/2.3 + 1.5/2.3$$

$$1.1/2.4 = 1.2/2.4 + 1.5/2.4$$

$$1.1/2.5 = 1.2/2.5 + 1.5/2.5$$

$$1.1/2.6 = 1.2/2.6 + 1.5/2.6$$

$$1.1/2.7 = 1.2/2.7 + 1.5/2.7$$

$$1.1/2.8 = 1.2/2.8 + 1.5/2.8$$

$$1.1/2.9 = 1.2/2.9 + 1.5/2.9$$

$$1.1/2.10 = 1.2/2.10 + 1.5/2.10$$

$$1.1/2.11 = 1.2/2.11 + 1.5/2.11$$

$$1.1/2.12 = 1.2/2.12 + 1.5/2.12$$

$$1.2/2.1 = 1.3/2.1 + 1.4/2.1$$

$$1.2/2.2 = 1.3/2.2 + 1.4/2.2$$

$$1.2/2.3 = 1.3/2.3$$

$$1.2/2.4 = 1.3/2.4 + 1.4/2.4$$

$$1.2/2.5 = 1.3/2.5 + 1.4/2.5$$

$$1.2/2.6 = 1.3/2.6 + 1.4/2.6$$

$$1.2/2.7 = 1.3/2.7$$

$$1.2/2.8 = 1.3/2.8$$

$$1.2/2.9 = 1.3/2.9$$

$$1.2/2.10 = 1.3/2.10$$

$$1.2/2.11 = 1.3/2.11 + 1.4/2.11$$

$$1.2/2.12 = 1.3/2.12 + 1.4/2.12$$

$$1.5/2.1 = 1.6/2.1 + 1.12/2.1$$

$$1.5/2.2 = 1.6/2.2 + 1.12/2.2$$

$$1.5/2.3 = 1.6/2.3$$

$$1.5/2.4 = 1.6/2.4 + 1.12/2.4$$

$$1.5/2.5 = 1.6/2.5 + 1.12/2.5$$

$$1.5/2.6 = 1.6/2.6 + 1.12/2.6$$

$$1.5/2.7 = 1.6/2.7$$

$$1.5/2.8 = 1.6/2.8$$

$$1.5/2.9 = 1.6/2.9$$

$$1.5/2.10 = 1.6/2.10$$

$$1.5/2.11 = 1.6/2.11 + 1.12/2.11$$

$$1.5/2.12 = 1.6/2.12 + 1.12/2.12$$

$$1.6/2.1 \geq 1.7/2.1 + 1.8/2.1 + 1.9/2.1 + 1.10/2.1 + 1.11/2.1$$

$$1.12/2.1 \geq 1.13/2.1 + 1.14/2.1 + 1.15/2.1 + 1.16/2.1$$

Kolonne-restriktioner

$$1.1/2.1 = 1.1/2.2 + 1.1/2.3 + 1.1/2.4 + 1.1/2.5 + 1.1/2.6 + 1.1/2.7 + 1.1/2.8 + 1.1/2.9 + 1.1/2.10$$

$$1.1/2.1 = 1.1/2.11 + 1.1/2.12$$

$$1.2/2.1 = 1.2/2.2 + 1.2/2.3 + 1.2/2.4 + 1.2/2.5 + 1.2/2.6 + 1.2/2.7 + 1.2/2.8 + 1.2/2.9 + 1.2/2.10$$

$$1.2/2.1 = 1.2/2.11 + 1.2/2.12$$

$$1.3/2.1 = 1.3/2.2 + 1.3/2.3 + 1.3/2.4 + 1.3/2.5 + 1.3/2.6 + 1.3/2.7 + 1.3/2.8 + 1.3/2.9 + 1.3/2.10$$

$$1.3/2.1 = 1.3/2.11 + 1.3/2.12$$

$$1.4/2.1 = 1.4/2.2 + 1.4/2.4 + 1.4/2.5 + 1.4/2.6$$

$$1.4/2.1 = 1.4/2.11 + 1.4/2.12$$

$$1.5/2.1 = 1.5/2.2 + 1.5/2.3 + 1.5/2.4 + 1.5/2.5 + 1.5/2.6 + 1.5/2.7 + 1.5/2.8 + 1.5/2.9 + 1.5/2.10$$

$$1.5/2.1 = 1.5/2.11 + 1.5/2.12$$

$$1.6/2.1 = 1.6/2.2 + 1.6/2.3 + 1.6/2.4 + 1.6/2.5 + 1.6/2.6 + 1.6/2.7 + 1.6/2.8 + 1.6/2.9 + 1.6/2.10$$

$$1.6/2.1 = 1.6/2.11 + 1.6/2.12$$

$$1.12/2.1 = 1.12/2.2 + 1.12/2.4 + 1.12/2.5 + 1.12/2.6$$

$$1.12/2.1 = 1.12/2.11 + 1.12/2.12$$

Skema: TUKOa og TUKOb

Række-restriktioner

Ingen.

Kolonne-restriktioner

$$1.1/2.1 = 1.1/2.2 + 1.1/2.3 + 1.1/2.4 + 1.1/2.5 + 1.1/2.6$$

$$1.1/2.1 = 1.1/2.7 + 1.1/2.8$$

$$1.2/2.1 = 1.2/2.2 + 1.2/2.3 + 1.2/2.4 + 1.2/2.5 + 1.2/2.6$$

$$1.2/2.1 = 1.2/2.7 + 1.2/2.8$$

Skema: TDDPIa og TDDPIb

Række-restriktioner

$$\begin{aligned}1.1/2.1 &= 1.2/2.1 + 1.6/2.1 \\1.1/2.2 &= 1.2/2.2 + 1.6/2.2 \\1.1/2.3 &= 1.2/2.3 + 1.6/2.3 \\1.2/2.1 &= 1.3/2.1 + 1.4/2.1 + 1.5/2.1 \\1.2/2.2 &= 1.3/2.2 + 1.4/2.2 \\1.2/2.3 &= 1.3/2.3 + 1.5/2.3 \\1.6/2.1 &= 1.7/2.1 + 1.8/2.1 \\1.6/2.2 &= 1.7/2.2 \\1.6/2.3 &= 1.8/2.3 \\1.6/2.4 &= 1.7/2.4 + 1.8/2.4\end{aligned}$$

Kolonne-restriktioner

$$\begin{aligned}1.1/2.1 &= 1.1/2.2 + 1.1/2.3 \\1.2/2.1 &= 1.2/2.2 + 1.2/2.3 \\1.3/2.1 &= 1.3/2.2 + 1.3/2.3 \\1.4/2.1 &= 1.4/2.2 \\1.5/2.1 &= 1.5/2.3 \\1.6/2.1 &= 1.6/2.2 + 1.6/2.3 \\1.7/2.1 &= 1.7/2.2 \\1.8/2.1 &= 1.8/2.3\end{aligned}$$

Skema: AFTPI

Række-restriktioner

Ingen.

Kolonne-restriktioner

$$\begin{aligned}1.1/2.1 &= 1.1/2.2 + 1.1/2.3 \\1.2/2.1 &= 1.2/2.2 + 1.2/2.3 \\1.9/2.1 &= 1.9/2.2 + 1.9/2.3 \\1.10/2.1 &= 1.10/2.2 + 1.10/2.3 \\1.11/2.1 &= 1.11/2.3 \\1.12/2.1 &= 1.12/2.1 + 1.12/2.3 \\1.13/2.1 &= 1.13/2.2 + 1.13/2.3 \\1.14/2.1 &= 1.14/2.3 \\1.15/2.1 &\geq 1.15/2.4 \\1.15/2.1 &\geq 1.15/2.5 \\1.15/2.1 &\geq 1.15/2.6 \\1.16/2.1 &\geq 1.16/2.4 \\1.16/2.1 &\geq 1.16/2.5 \\1.16/2.1 &\geq 1.16/2.6\end{aligned}$$

$$1.17/2.1 = 1.17/2.2 + 1.17/2.3$$

$$1.17/2.3 \geq 1.17/2.4$$

$$1.17/2.3 \geq 1.17/2.5$$

$$1.17/2.3 \geq 1.17/2.6$$

$$1.18/2.1 = 1.18/2.2 + 1.18/2.3$$

$$1.18/2.3 \geq 1.18/2.4$$

$$1.18/2.3 \geq 1.18/2.5$$

$$1.18/2.3 \geq 1.18/2.6$$

Skema: MKORTPIa og MKORTPIb

Række-restriktioner

$$1.1/2.1 = 1..2/2.1 + 1.3/2.1 + 1.4/2.1$$

$$1.1/2.2 = 1..2/2.2 + 1.3/2.2 + 1.4/2.2$$

$$1.1/2.3 = 1..2/2.3 + 1.3/2.3 + 1.4/2.3$$

$$1.1/2.4 = 1..2/2.4 + 1.3/2.4 + 1.4/2.4$$

$$1.1/2.5 = 1..2/2.5 + 1.3/2.5 + 1.4/2.5$$

$$1.1/2.6 = 1..2/2.6 + 1.3/2.6 + 1.4/2.6$$

$$1.1/2.7 = 1..2/2.7 + 1.3/2.7 + 1.4/2.7$$

$$1.1/2.8 = 1..2/2.8 + 1.3/2.8 + 1.4/2.8$$

$$1.1/2.9 = 1..2/2.9 + 1.3/2.9 + 1.4/2.9$$

$$1.1/2.10 = 1..2/2.10 + 1.3/2.10 + 1.4/2.10$$

$$1.5/2.1 = 1.6/2.1 + 1.7/2.1$$

$$1.5/2.2 = 1.6/2.2 + 1.7/2.2$$

$$1.5/2.3 = 1.6/2.3 + 1.7/2.3$$

$$1.5/2.4 = 1.6/2.4 + 1.7/2.4$$

$$1.5/2.5 = 1.6/2.5 + 1.7/2.5$$

$$1.5/2.6 = 1.6/2.6 + 1.7/2.6$$

$$1.5/2.7 = 1.6/2.7 + 1.7/2.7$$

Kolonne-restriktioner

$$1.1/2.1 = 1.1/2.2 + 1.1/2..3 + 1.1/2..5 + 1.1/2.6 + 1.1/2.7 + 1.1/2.8 + 1.1/2.9 + 1.1/2.10$$

$$1.2/2.1 = 1.2/2.2 + 1.2/2..3 + 1.2/2..5 + 1.2/2.6 + 1.2/2.7 + 1.2/2.8 + 1.2/2.9 + 1.2/2.10$$

$$1.3/2.1 = 1.3/2.2 + 1.3/2..3 + 1.3/2..5 + 1.3/2.6 + 1.3/2.7 + 1.3/2.8 + 1.3/2.9 + 1.3/2.10$$

$$1.4/2.1 = 1.4/2.2 + 1.4/2..3 + 1.4/2..5 + 1.4/2.6 + 1.4/2.7 + 1.4/2.8 + 1.4/2.9 + 1.4/2.10$$

$$1.5/2.1 = 1.5/2.2 + 1.5/2..3 + 1.5/2..5 + 1.5/2.6 + 1.5/2.7$$

$$1.6/2.1 = 1.6/2.2 + 1.6/2..3 + 1.6/2..5 + 1.6/2.6 + 1.6/2.7$$

$$1.7/2.1 = 1.7/2.2 + 1.7/2..3 + 1.7/2..5 + 1.7/2.6 + 1.7/2.7$$

$$1.1/2.3 \geq 1.1/2.4$$

$1.2/2.3 \geq 1.2/2.4$
 $1.3/2.3 \geq 1.3/2.4$
 $1.4/2.3 \geq 1.4/2.4$
 $1.5/2.3 \geq 1.5/2.4$
 $1.6/2.3 \geq 1.6/2.4$
 $1.7/2.3 \geq 1.7/2.4$

Skema: NETSPOS

Række-restriktioner

$1.1/2.1 \geq 1.2/2.1$
 $1.1/2.1 \geq 1.3/2.1$
 $1.1/2.1 \geq 1.4/2.1$
 $1.1/2.1 \geq 1.5/2.1$
 $1.1/2.1 \leq 1.6/2.1$

Kolonne-restriktioner

Ingen.

Skema: TNETS

Række-restriktioner

$1.1/2.1 = 1.2/2.1 + 1.3/2.1$
 $1.1/2.2 = 1.2/2.2 + 1.3/2.2$

Kolonne-restriktioner

Ingen.

Skema: TAKORT

Række-restriktioner

Ingen.

Kolonne-restriktioner

Ingen.

Skema: AFTNETS

Række-restriktioner

$1.2/2.1 = 1.3/2.1 + 1.4/2.1$

Kolonne-restriktioner

$1.14/2.1 \geq 1.14/2.2$

1.14/2.1 \geq 1.14/2.3

1.14/2.1 \geq 1.14/2.4

1.15/2.1 \geq 1.15/2.2

1.15/2.1 \geq 1.15/2.3

1.15/2.1 \geq 1.15/2.4

1.16/2.1 \geq 1.16/2.2

1.16/2.1 \geq 1.16/2.3

1.16/2.1 \geq 1.16/2.4

Skema: MUKORTa og MUKORTb

Række-restriktioner

$$1.1/2.1 = 1.2/2.1 + 1.3/2.1$$

$$1.1/2.2 = 1.2/2.2 + 1.3/2.2$$

$$1.1/2.3 = 1.2/2.3 + 1.3/2.3$$

$$1.1/2.4 = 1.2/2.4 + 1.3/2.4$$

$$1.1/2.5 = 1.2/2.5 + 1.3/2.5$$

$$1.1/2.6 = 1.2/2.6 + 1.3/2.6$$

$$1.1/2.7 = 1.2/2.7 + 1.3/2.7$$

Kolonne-restriktioner

$$1.1/2.1 = 1.1/2.2 + 1.1/2.3 + 1.1/2.5 + 1.1/2.6 + 1.1/2.7$$

$$1.2/2.1 = 1.2/2.2 + 1.2/2.3 + 1.2/2.5 + 1.2/2.6 + 1.2/2.7$$

$$1.3/2.1 = 1.3/2.2 + 1.3/2.3 + 1.3/2.5 + 1.3/2.6 + 1.3/2.7$$

$$1.1/2.3 \geq 1.1/2.4$$

$$1.2/2.3 \geq 1.2/2.4$$

$$1.3/2.3 \geq 1.3/2.4$$

Skema: DELTBS

Række-restriktioner

$$1.1/2.1 = 1.2/2.1 + 1.10/2.1$$

$$1.1/2.2 = 1.2/2.2 + 1.10/2.2$$

$$1.1/2.3 = 1.2/2.3 + 1.10/2.3$$

$$1.2/2.1 = 1.3/2.1 + 1.4/2.1 + 1.5/2.1$$

$$1.2/2.2 = 1.3/2.2 + 1.4/2.2 + 1.5/2.3$$

$$1.2/2.3 = 1.3/2.3 + 1.4/2.2 + 1.5/2.3$$

$$1.5/2.1 = 1.6/2.1 + 1.7/2.1 + 1.8/2.1 + 1.9/2.1$$

$$1.5/2.2 = 1.6/2.2 + 1.7/2.2 + 1.8/2.2 + 1.9/2.2$$

$$1.5/2.3 = 1.6/2.3 + 1.7/2.3 + 1.8/2.3 + 1.9/2.3$$

Kolonne-restriktioner

Ingen.

Skema: TBSa og TBSb

Række-restriktioner

$$1.1/2.1 = 1.2/2.1 + 1.3/2.1$$

$$1.1/2.2 = 1.2/2.2 + 1.3/2.2$$

$$1.1/2.3 = 1.2/2.3 + 1.3/2.3$$

$$1.1/2.4 = 1.2/2.4 + 1.3/2.4$$

$$1.1/2.5 = 1.2/2.5 + 1.3/2.5$$

$$1.1/2.6 = 1.2/2.6 + 1.3/2.6$$

$$1.1/2.7 = 1.2/2.7 + 1.3/2.7$$

$$1.1/2.8 = 1.2/2.8 + 1.3/2.8$$

Kolonne-restriktioner

$$1.1/2.1 = 1.1/2.2 + 1.1/2.3 + 1.1/2.4 + 1.1/2.5 + 1.1/2.6 + 1.1/2.7 + 1.1/2.8$$

$$1.2/2.1 = 1.2/2.2 + 1.2/2.3 + 1.2/2.4 + 1.2/2.5 + 1.2/2.6 + 1.2/2.7 + 1.2/2.8$$

$$1.3/2.1 = 1.3/2.2 + 1.3/2.3 + 1.3/2.4 + 1.3/2.5 + 1.3/2.6 + 1.3/2.7 + 1.3/2.8$$

$$1.4/2.1 = 1.4/2.2 + 1.4/2.3 + 1.4/2.4 + 1.4/2.5 + 1.4/2.6 + 1.4/2.7 + 1.4/2.8$$

$$1.5/2.1 = 1.5/2.2 + 1.5/2.3 + 1.5/2.4 + 1.5/2.5 + 1.5/2.6 + 1.5/2.7 + 1.5/2.8$$

Andre restriktioner

$$1.1/2.9 \leq 100$$

$$1.1/2.10 \leq 100$$

$$1.2/2.9 \leq 100$$

$$1.2/2.10 \leq 100$$

$$1.3/2.9 \leq 100$$

$$1.3/2.10 \leq 100$$

Skema: EPT

Række-restriktioner

$$1.1/2.1 \geq 1.2/2.1$$

$$1.1/2.1 \geq 1.3/2.1$$

$$1.1/2.1 \geq 1.4/2.1$$

Kolonne-restriktioner

Ingen.

Skema: POSKTL

Række-restriktioner

$$1.1/2.1 \geq 1.2/2.1$$

$$1.1/2.1 \geq 1.3/2.1$$

$$1.1/2.1 \geq 1.4/2.1$$

$$1.1/2.1 \geq 1.5/2.1$$

Kolonne-restriktioner

Ingen.

Skema: HIKH

Række-restriktioner

Ingen.

Kolonne-restriktioner

Ingen.

Skema: MNETB

Række-restriktioner

$$1.1/2.1 \geq 1.2/2.1$$

$$1.1/2.2 \geq 1.2/2.2$$

$$1.1/2.3 \geq 1.2/2.3$$

$$1.1/2.4 \geq 1.2/2.4$$

Kolonne-restriktioner

$$1.1/2.1 = 1.1/2.2 + 1.1/2.3 + 1.1/2.4$$

$$1.2/2.1 = 1.2/2.2 + 1.2/2.3 + 1.2/2.4$$

$$1.3/2.1 = 1.3/2.2 + 1.3/2.3 + 1.3/2.4$$

Skema: DELRTGS*Række-restriktioner*

$$1.1/2.1 = 1.2/2.1 + 1.10/2.1$$

$$1.1/2.2 = 1.2/2.2 + 1.10/2.2$$

$$1.2/2.1 = 1.3/2.1 + 1.4/2.1 + 1.5/2.1$$

$$1.2/2.2 = 1.3/2.2 + 1.4/2.2 + 1.5/2.3$$

$$1.5/2.1 = 1.6/2.1 + 1.7/2.1 + 1.8/2.1 + 1.9/2.1$$

$$1.5/2.2 = 1.6/2.2 + 1.7/2.2 + 1.8/2.2 + 1.9/2.2$$

Kolonne-restriktioner

Ingen.

Skema: TRTGSa og TRTGSb*Række-restriktioner*

Ingen.

Kolonne-restriktioner

$$1.1/2.1 = 1.1/2.2$$

$$1.1/2.1 = 1.1/2.6 + 1.1/2.7$$

$$1.2/2.1 = 1.2/2.2 + 1.2/2.3$$

$$1.2/2.3 = 1.2/2.4 + 1.2/2.5$$

$$1.2/2.1 = 1.2/2.6 + 1.2/2.7$$

Andre restriktioner

$$1.1/2.8 \leq 100$$

$$1.1/2.9 \leq 100$$

$$1.2/2.8 \leq 100$$

$$1.2/2.9 \leq 100$$

Skema: AFTQVR

Række-restriktioner

Ingen.

Kolonne-restriktioner

$$1.1/2.1 \geq 1.1/2.4$$

$$1.1/2.1 \geq 1.1/2.5$$

$$1.1/2.1 \geq 1.1/2.6$$

$$1.2/2.1 \geq 1.2/2.4$$

$$1.2/2.1 \geq 1.2/2.5$$

$$1.2/2.1 \geq 1.2/2.6$$

$$1.3/2.1 = 1.3/2.2 + 1.3/2.3$$

$$1.3/2.3 \geq 1.3/2.4$$

$$1.3/2.3 \geq 1.3/2.5$$

$$1.3/2.3 \geq 1.3/2.6$$

$$1.4/2.1 = 1.4/2.2 + 1.4/2.3$$

$$1.4/2.3 \geq 1.4/2.4$$

$$1.4/2.3 \geq 1.4/2.5$$

$$1.4/2.3 \geq 1.4/2.6$$

$$1.7/2.1 = 1.7/2.2 + 1.7/2.3$$

$$1.8/2.1 = 1.8/2.2 + 1.8/2.3$$