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1  -- Annual Transaction % Change Analysis for European Countries
2  WITH UnpivotedData AS (
3      -- Convert columns to rows (wide to long)
4      SELECT
5          [TIME_PERIOD] AS Year,
6          'Austria' AS Country,
7          Austria AS PaymentValue
8      FROM ECB_Total_Payments
9      WHERE [TIME_PERIOD] IS NOT NULL
10
11     UNION ALL
12     SELECT [TIME_PERIOD], 'Belgium', Belgium FROM ECB_Total_Payments
13     WHERE [TIME_PERIOD] IS NOT NULL
14
15     UNION ALL
16     SELECT [TIME_PERIOD], 'Germany', Germany FROM ECB_Total_Payments
17     WHERE [TIME_PERIOD] IS NOT NULL
18
19     UNION ALL
20     SELECT [TIME_PERIOD], 'Finland', Finland FROM ECB_Total_Payments
21     WHERE [TIME_PERIOD] IS NOT NULL
22
23     UNION ALL
24     SELECT [TIME_PERIOD], 'France', France FROM ECB_Total_Payments
25     WHERE [TIME_PERIOD] IS NOT NULL
26
27     UNION ALL
28     SELECT [TIME_PERIOD], 'Italy', Italy FROM ECB_Total_Payments
29     WHERE [TIME_PERIOD] IS NOT NULL
30
31     UNION ALL
32     SELECT [TIME_PERIOD], 'Luxembourg', Luxembourg FROM ECB_Total_Payments
33     WHERE [TIME_PERIOD] IS NOT NULL
34
35     UNION ALL
36     SELECT [TIME_PERIOD], 'Netherlands', Netherlands FROM ECB_Total_Payments
37     WHERE [TIME_PERIOD] IS NOT NULL
38
39     UNION ALL
40     SELECT [TIME_PERIOD], 'Poland', Poland FROM ECB_Total_Payments
41     WHERE [TIME_PERIOD] IS NOT NULL
42
43     UNION ALL
44     SELECT [TIME_PERIOD], 'Sweden', Sweden FROM ECB_Total_Payments
45     WHERE [TIME_PERIOD] IS NOT NULL
46 ),
47 YoYData AS (
48     -- Calculate Annual % change
49     SELECT
50         Year,
51         Country,
```

```
52     PaymentValue,
53     LAG(PaymentValue, 1) OVER (PARTITION BY Country ORDER BY Year) AS PrevYearValue
54 FROM UnpivotedData
55 WHERE PaymentValue IS NOT NULL -- Exclude NULL payment values
56 )
57 -- Final results
58 SELECT
59     Year,
60     Country,
61     PaymentValue,
62     PrevYearValue,
63     CASE
64         WHEN PrevYearValue IS NULL OR PrevYearValue = 0 THEN NULL
65         ELSE ROUND((PaymentValue - PrevYearValue) / PrevYearValue * 100, 2)
66     END AS YoY_Growth_Pct
67 FROM YoYData
68 WHERE
69     Year BETWEEN 2000 AND 2023 -- Filter for complete years
70
71     AND PrevYearValue IS NOT NULL -- Only show years with previous data
72 ORDER BY
73     Country,
74     Year;
```