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## **CSDB**

Consumption of Speculative Data Barrier is a memory barrier that controls speculative execution and data value prediction.

No instruction other than branch instructions appearing in program order after the CSDB can be speculatively executed using the results of any:

- Data value predictions of any instructions.
- PSTATE.{N,Z,C,V} predictions of any instructions other than conditional branch instructions appearing in program order before the CSDB that have not been architecturally resolved.
- Predictions of SVE predication state for any SVE instructions.

## Note

For purposes of the definition of CSDB, PSTATE. {N,Z,C,V} is not considered a data value. This definition permits:

- Control flow speculation before and after the CSDB.
- Speculative execution of conditional data processing instructions after the CSDB, unless they use the results of data value or PSTATE.{N,Z,C,V} predictions of instructions appearing in program order before the CSDB that have not been architecturally resolved.

```
31 30 29 28 27 26 25 24 23 22 21 20 19 18 17 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1 0 1 1 0 0 1 0 1 0 1 0 0 0 0 1 1 0 0 0 0 1 0 1 0 1 1 1 1 1 1 1 CRm op2
```

**CSDB** 

// Empty.

## **Operation**

ConsumptionOfSpeculativeDataBarrier();

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 $Internal\ version\ only: is a\ v33.64,\ AdvSIMD\ v29.12,\ pseudocode\ no\_diffs\_2023\_09\_RC2,\ sve\ v2023-06\_rel\ ;\ Build\ timestamp:\ 2023-09-18T17:56$ 

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