## **Case 1: Queries Performance Inconsistencies**

* **Issue**: Queries run inconsistently throughout the day with no clear explanation.
  + Sometimes queries complete in just a few seconds.
  + Other times, the same queries take 20 seconds or more.
  + Memory eviction due to Fabric capacity pressure is suspected as the root cause.
* **Business Impact**:
  + End users experience unpredictable report performance, reducing confidence in the system.
  + Analysts and risk managers face delays in retrieving critical insights, slowing decision-making.
  + Reduced productivity as users must wait longer for dashboards or re-run queries.

## **Case 2: Databricks Query Folding Issues**

* **Issue**: Power BI is not folding certain queries efficiently to Databricks.
  + Filters such as **COB Date** are not pushed down in DirectQuery mode.
  + Queries using slicers or measures (e.g., SUM Extended Model) result in inefficient SQL and large intermediate datasets.
  + SQL traces confirm filtering is applied in Power BI instead of at the source.
* **Business Impact**:
  + Queries take significantly longer to execute.
  + Databricks resources are strained by unnecessary full scans.
  + End-user performance is degraded, especially during peak usage.

## **Case 3: Semantic Model Size and Memory Pressure**

* **Issue**: The semantic model size exceeds current Fabric capacity limits.
  + Model includes **8 CoB dates**, requiring ~132 GB of memory.
  + This exceeds the F256 SKU limit (~103 GB).
  + Parallel refreshes and user queries further increase pressure on capacity and reduce stability.
  + Microsoft recommendation: upgrade to a larger SKU (e.g., F512) or reduce partitions.
* **Business Impact**:
  + Refreshes may fail or run slowly, disrupting reporting cycles.
  + Query performance is degraded during business hours.
  + Without scaling or optimization, the system cannot reliably support current workload demands.

✅ Now Case 3 reflects **8 CoB dates** and the semantic model memory pressure more precisely.

Do you also want me to turn this into a **single-slide management summary** (Issue / Impact / Recommendation per case) so it’s easy to present in meetings?