**Analysing Discrepancies in Product Type Classification**

The observation that the manual defines 12 Level 1 product types and 51 Level 3 product types, while the Blackrock dataset contains 9 Level 1 product types and 86 Level 3 product types highlights a significant discrepancy between the two classification systems. This difference emphasizes the challenges in harmonizing classifications between a general standard (the manual) and a specific, potentially evolving internal system (the Blackrock dataset).

**Level 1 Divergence:** The manual's more extensive set of Level 1 product types (12 vs. 9) suggests a broader classification scope compared to the Blackrock dataset. This could indicate that Blackrock's dataset focuses on a narrower range of asset classes relevant to its operations or regional focus within the EMEA market.

**Level 3 Expansion:** The Blackrock dataset's significantly larger number of Level 3 product types (86 vs. 51) implies a greater level of granularity in classifying assets. This could reflect Blackrock's need for detailed categorization due to the complexity or specialization of the instruments it handles. It aligns with the observation that the Blackrock dataset includes classifications like "Discretionary Mandates" and specific OTC derivatives, which are absent from the manual.

**Potential Causes and Considerations:**

**Evolution and Customization**: Blackrock's internal classification system, reflected in the EMEA dataset, might have evolved or been tailored to accommodate its specific business needs and the nuances of the EMEA market. This customization could lead to the introduction of new product types and a different level of classification detail compared to the more general asset class manual.

**Data Scope and Focus**: The specific instruments present in the Blackrock dataset, driven by its operational focus, could contribute to the variation in Level 3 product types. For example, if the dataset primarily contains instruments common in the EMEA region, the Level 3 categories might reflect this regional bias, leading to differences from the manual's broader perspective.

**Impact on Harmonization:**

These discrepancies necessitate a strategic approach to harmonize the classification systems:

**Mapping and Cross-Referencing:** Create a mapping document that cross-references the product types in the Blackrock dataset with those in the asset class manual. Identify direct matches, areas where the Blackrock dataset introduces new categories, and instances where the manual's broader categories need to be aligned with more specific Blackrock classifications.

**Rules Engine Adaptation**: The rules engine used for tagging should be adaptable enough to accommodate the discrepancies between the two systems. This might involve incorporating specific rules for Blackrock's unique categories and logic to handle instances where the manual's broader categories need to be mapped to more granular Blackrock classifications.

By acknowledging these discrepancies and implementing a robust mapping and adaptation process, you can create a more accurate and consistent classification system that balances the specificity of Blackrock's internal data with the broader framework of the asset class manual.