**Supporting Materials for**

**“More than just statics: temporal** **dynamics of intrinsic brain activity predict the suicidal ideation in depressed patients”**

**Running title:** Brain dynamics predict suicidal ideation

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**Supplementary Figure S1**



**Figure S1. Group differences of the *static* ALFF pattern**. The static ALFF pattern of statistically significant differences between SI and NSI groups were identified using two-sample t-tests. The statistical significance level was set PFWER < 0.05 under permutation test based corrections. The inset box-and-whisker plot indicates the planned post-hoc analysis between SI and HCs, and between NSI and HCs using two-sample t-tests. \* denotes p < 0.05, uncorrected. \*\* denotes p < 0.05 Bonferroni correction with 2 times planned comparisons, respectively. HCs, healthy controls; NSI, major depressive disorder without suicidal ideation; SI, major depressive disorder with suicidal ideation.

**Supplementary Figure S2**



**Figure S2.** **Reproducibility results in different sliding window length**. Two additional sliding-window lengths were chosen with 30 TRs (60 s) and 80 TRs (160 s). The statistical significance level was set PFWER < 0.05 under permutation test-based corrections.

**Supplementary Figure S3**



**Figure S3. Across subject correlations between mean FD and temporal variability of dALFF from group difference regions**. None of the correlation coefficient was significant (all *p* > 0.05). A, B and C represented correlation analysis in healthy controls, MDD patients without SI and with SI, respectively. Filled symbols denote that the data points were included in correlation analyses. Open symbols denote that the data points were outliers. MDD, major depressive disorder; SI, suicidal ideation; dACC, dorsal anterior cingulate cortex; dALFF, dynamic amplitude low-frequency fluctuation; FD, framewise-displacement; HIP, hippocampus; OFC, orbital frontal cortex; ITG, inferior temporal gyrus.