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```
#ifndef GRIDSPARSE_FUNCTIONS_VARSWAP_H
#define GRIDSPARSE_FUNCTIONS_VARSWAP_H
#include "varswap3d_std.h"
#include "math/equity_pricer/pde_tools.h"
#include "math/equity_pricer/gridsparse_constructor.h"

typedef struct SVSSparseOp
{
    VARSWAP3D_MOD *Model;
    double theta_time_scheme;
    PremiaPDETimeGrid *TG;
    GridSparse *G;
    PnlVect *PC, * V_tmp0, * V_tmp1, * V_tmp2, * V_tmp3,
        * V_tmp4, * V_tmp5, * V_tmp6, * V_tmp7, *V_volatility;
} SVSSparseOp;

////////////////////////////////////////
// Stochastic Variance Swap Model Operator on Sparse Grid
////////////////////////////////////////

extern SVSSparseOp *svs_sparse_operator_create(int lev, int N_T, VARSWAP3D_MOD *
extern void svs_sparse_operator_free(SVSSparseOp **Op);
extern void GridSparse_Solve_svs(SVSSparseOp *Op, PnlVect *Vres);
#endif
```