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The Basel IV Standardized Approach PwC-Tools

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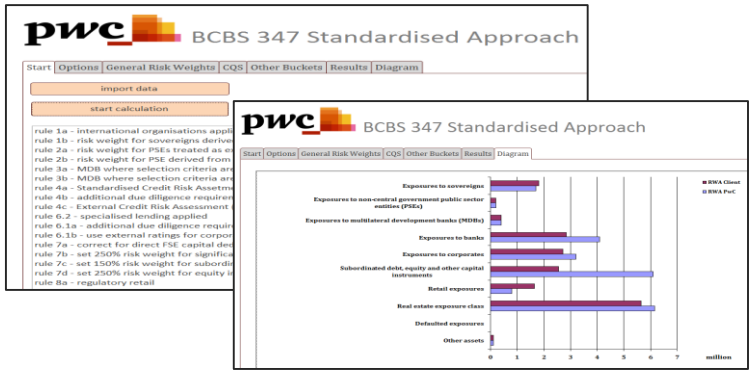
	Data requirements	*Tool*	*Comparison old/new*	*Simulation*	*Graphical output*	*Detailed result*	*Customi-zation*
Credit Risk (CR SA + IRBA)	Excel	Access	✓ (Also comparison to IRB with the PwC Credit Risk - QIS-Tool)	✓	✓	✓	✓
SA-CCR	Excel	Access	✓ (Current EAD can be complemented)	✓	✓	✓	✓
SECuritization Calculation Tool	Excel	Access	✓ (CRR vs. EBA External/ Internal RBA/SEC SA)	✓	✓	✓	✓
OpRisk	P&L/Balance data/OpRisk-losses of the last ten years	Excel	✓	✓	? (can be complemented)	? (can be complemented)	✓
FRTB	csv-Data	Access	✓	✓	✓	✓	✓

You are invited to visit our Webex Session, that clearly illustrates the Basel IV standardized approach PwC-Tools
https://www.youtube.com/channel/UCosEew32vLFgApuGR048bBg

The PwC SA-Tool

PwC SA-Tool

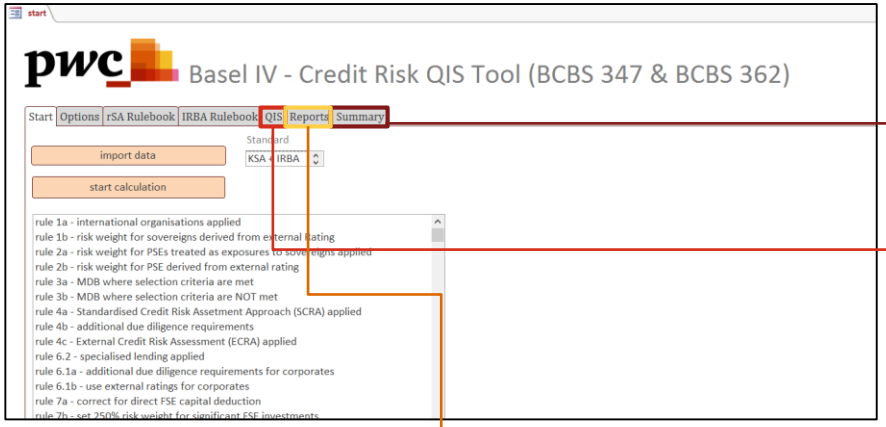


- PwC developed an access-based Tool for calculating the CR SA
- Easy adjustment of the Tool possible (e. g. for additional analyses)
- Integration of (graphical) outputs in project documentations and presentations
- Extensive practical testing of the Tool in different preliminary studies

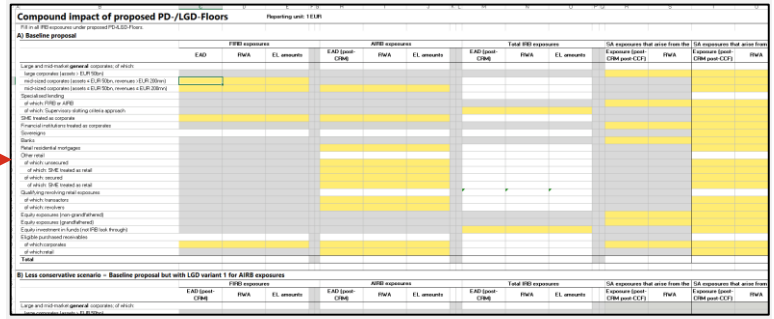
Application potential of PwC SA-Tools

- Pragmatical performing of test calculations possible
- Data import via CSV-file. Derivation of the import–interface from the BAIS-Input or rather result tables is possible
- Calculation of capital requirements below the setting of different options, e.g. usage of external ratings (yes/no)
- High adoption flexibility, e.g. to carry out scenario-analyses
- Results presented (RWA old/RWA new) as graphical outputs. Export of results in CSV-format is possible

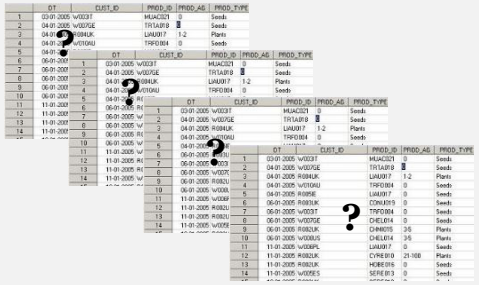
The PwC Credit Risk QIS-Tool



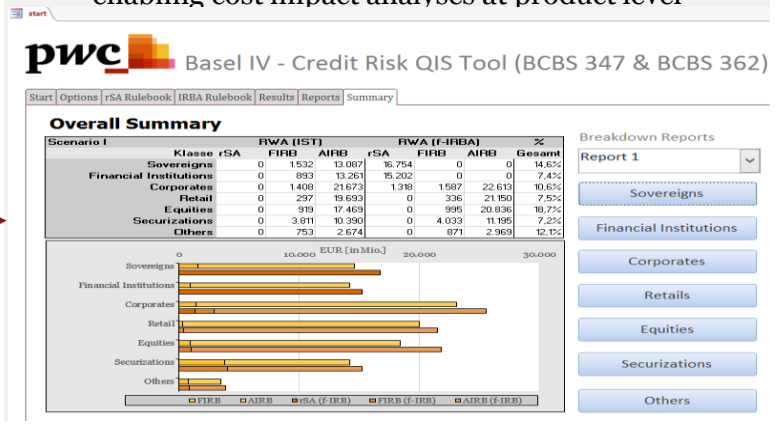
QIS output aligned with official BCBC/EBA templates



Customizable reports depending on complexity of business model in order to derive the product based margin impact of parameter floors and the transition of exposures to the SA



Standardized reports at various granularity levels enabling cost impact analyses at product level

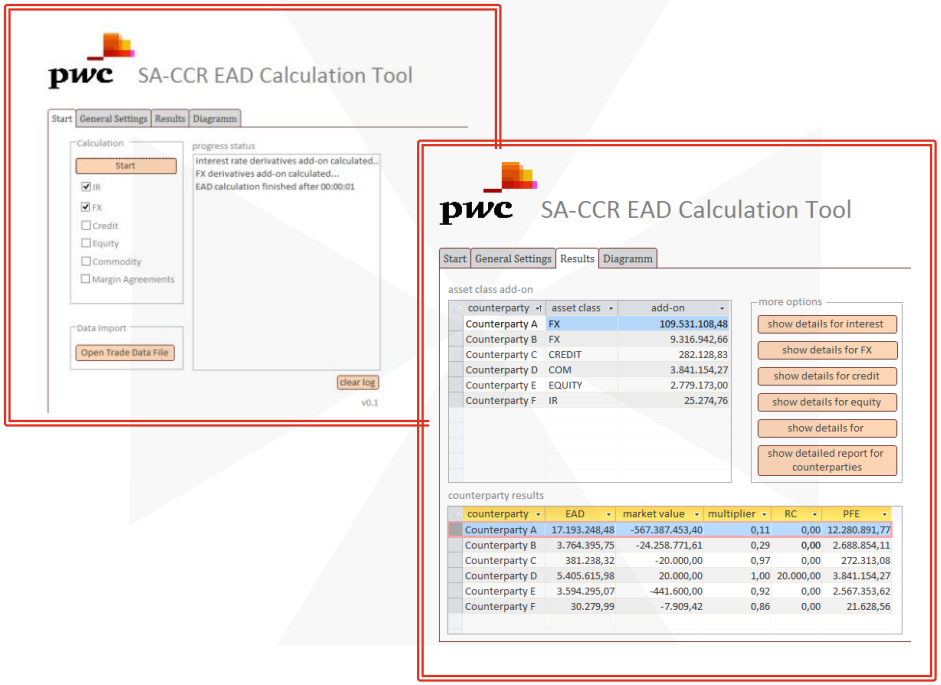


The PwC SA-CCR tool

The SA-CCR-tool is an access-based calculation-tool, which was developed by PwC in order to support our clients with the implementation of the new SA-CCR requirements. PwC's SA-CCR-tool ensures the following:

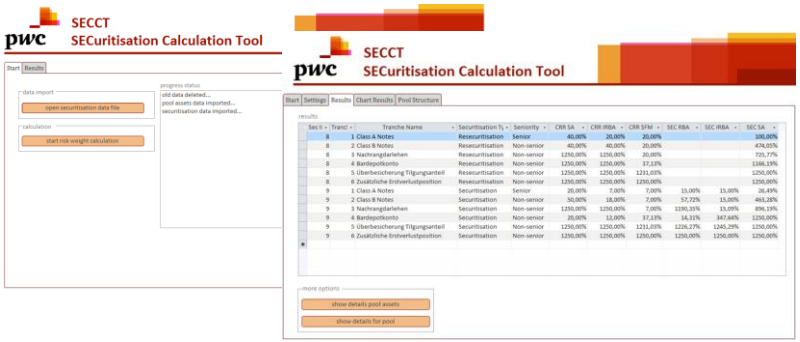
- Implementation of the regulatory requirements of BCBS 279 within the EAD calculation
- Dynamic application of the tool irrespective of the composition of the derivative portfolio
- Determination of the EAD following a systematic and logical approach
- Flexible evaluation possibilities for analytic and strategic purposes
- Capability to assess the impact of collateral and netting agreements
- …

SA-CCR Tool



PwC SECCT – SECuritisation Calculator Tool

PwC SECCT

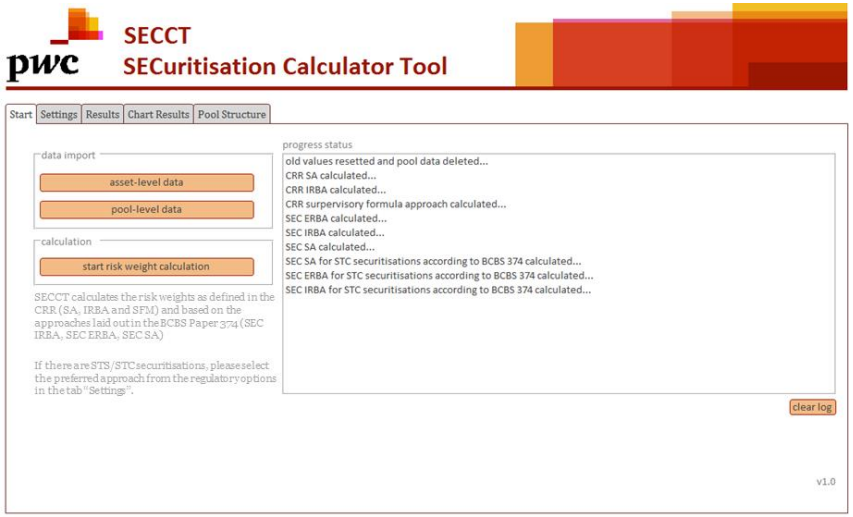


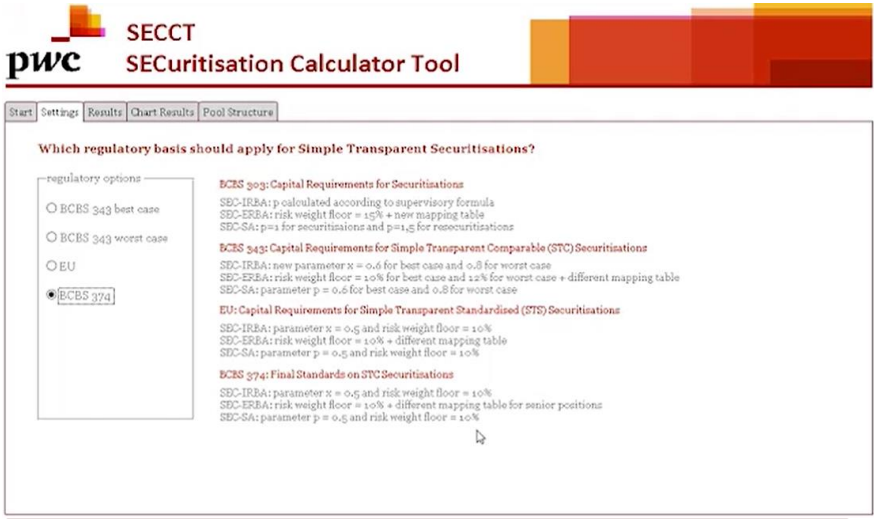
- PwC developed an access-based Tool to calculate the existing and the new approaches including STS securitization
- Easy adjustment of the Tool is possible (e.g. for additional analyses)
- Integration of (graphical) results in project documentations and presentations
- Extensive practical testing of the Tool in different preliminary studies

Application potential of PwC SECCT

- Test calculations SEC-IRB, SEC-ERBA und SEC-SA
- Input on portfolio level as well as on the level of the individual securitised positions
- Calculation of capital requirements under the setting of different options is possible (e.g. taking into account the STS-Rules)
- High adoption flexibility, e.g. to carry out scenario analyses
- Result presentation (RWA old/RWA new) as graphical output. Export of results in CSV-format is possible

SECCT (1/2)
Simulation of the new Approaches for your Portfolio





Click the tab „**start**“ and the relevant portfolio data and structure data can be read in in xls. format and can be processed

- Asset Level Data
- Pool Level Data

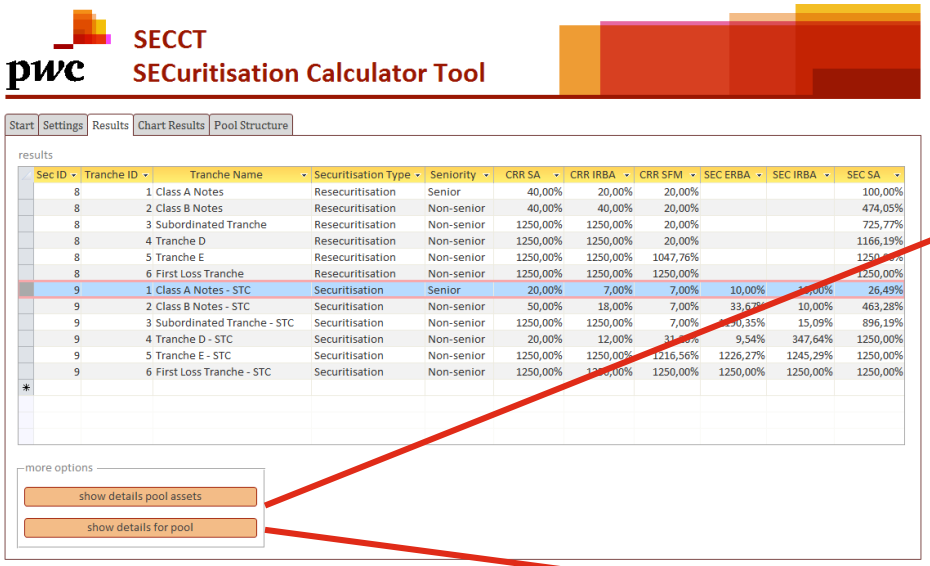
The tab “**settings**” enables the selection of different frameworks for calculating the risk-weights

- EU-proposals (commission, board, parliament)
- Basel (BCBS 343) including the regulations to STC-securitisations (BCBS 374)

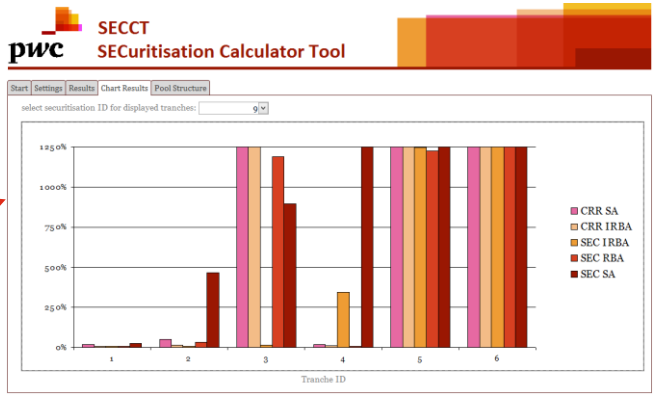
Comfortable Input of Input-Data for…

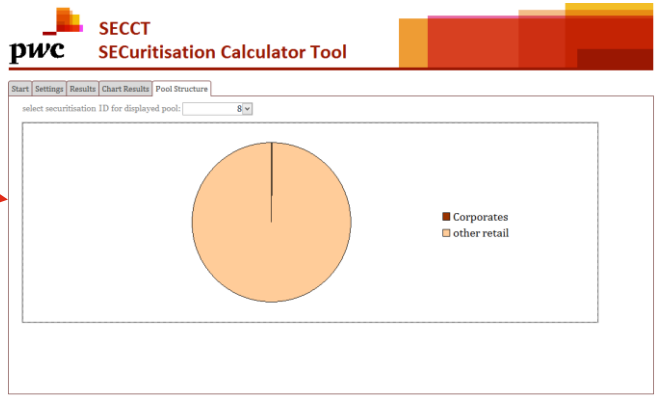
- **Test calculations of additional capital requirements for existing portfolios ✓**
- **simulation of different portfolios/ structures for the new business✓**

SECCT (2/2)
Simulation of the new Approaches for your Portfolio



Sec ID	Tranche ID	Tranche Name	Securitisation Type	Seniority	CRR SA	CRR IRBA	CRR SFM	SEC ERBA	SEC IRBA	SEC SA
8	1	Class A Notes	Resecuritisation	Senior	40,00%	20,00%	20,00%			100,00%
8	2	Class B Notes	Resecuritisation	Non-senior	40,00%	40,00%	20,00%			474,05%
8	3	Subordinated Tranche	Resecuritisation	Non-senior	1250,00%	1250,00%	20,00%			725,77%
8	4	Tranche D	Resecuritisation	Non-senior	1250,00%	1250,00%	20,00%			1166,19%
8	5	Tranche E	Resecuritisation	Non-senior	1250,00%	1250,00%	1047,76%			1250,00%
8	6	First Loss Tranche	Resecuritisation	Non-senior	1250,00%	1250,00%	1250,00%			1250,00%
9	1	Class A Notes - STC	Securitisation	Senior	20,00%	7,00%	7,00%	10,00%	15,00%	26,49%
9	2	Class B Notes - STC	Securitisation	Non-senior	50,00%	18,00%	7,00%	33,67%	10,00%	463,28%
9	3	Subordinated Tranche - STC	Securitisation	Non-senior	1250,00%	1250,00%	7,00%	1250,35%	15,09%	896,19%
9	4	Tranche D - STC	Securitisation	Non-senior	20,00%	12,00%	31,56%	9,54%	347,64%	1250,00%
9	5	Tranche E - STC	Securitisation	Non-senior	1250,00%	1250,00%	1216,56%	1226,27%	1245,29%	1250,00%
9	6	First Loss Tranche - STC	Securitisation	Non-senior	1250,00%	1250,00%	1250,00%	1250,00%	1250,00%	1250,00%



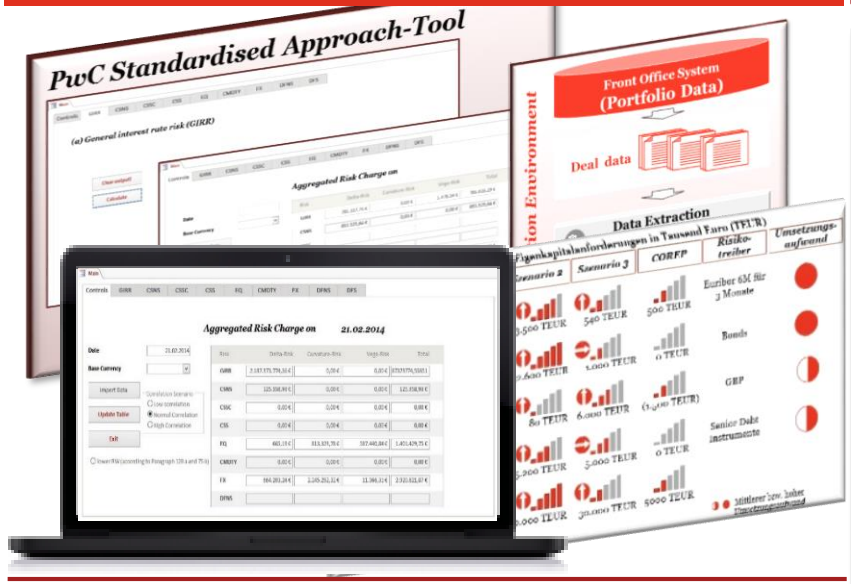


Using the tab „**results**“ the results of the calculation are presented and visualized:

- Presentation of risk-weights according to approach
- Presentation of pool-structure

The PwC Sensitivity Based Approach Tool

PwC SBA-Tool



- PwC developed an access-based Tool for calculating the SBA
- Easy adjustment of the Tool (e.g. for additional quantification-analyses)
- The access-based Tool enables a good performance while handling large datasets

Aplication potential of PwC SBA-Tool

General

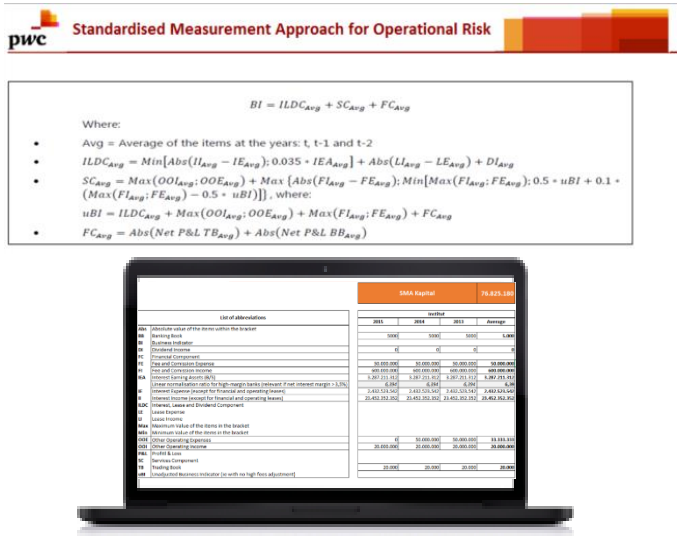
- Pragmatical implementation of test calculations is possible
- Calculation of capital requirements for Delta-, Vega-, Curvature-, default- and residual risk on all desk levels
- Implement the calculation for all risk areas as well as per desk-level

Added Value

- **Adaption flexibility:** Quantifying the impact on the capital requirements by taking into account portfolio-scenarios or desk-structures
- **Granularity levels:** Calculating the capital requirements per risk area (GIRR, CNCS, etc.) in separate tables enables the identification of risk drivers
- **Output validation:** fundamental analyzing possibilities serve as a basis for the validation of test calculations
- **Scenario Analysis:** strategic measures as well as an optimal product allocation on significant risk drivers are based on scenario analyses for different trading book boundaries

The PwC SMA-Tool

PwC SMA-Tool



- PwC developed an Excel-based Tool for calculating the capital requirements for OpRisk according to SMA
- Easy adjustment of the Tool is possible (e.g. for additional scenario-calculations)

Application potential of PwC SMA-Tool

General

- Calculation of the capital requirements for OpRisk according to SMA (BCBS 355)
- Flexible evaluation possibilities for analytic or strategic purposes (scenario calculations)

Added Value

- **Impact Analysis:** Comparison between the capital requirements that are calculated with the Tool according to SMA and the existing capital requirements for OpRisk
- **Scenario Analysis:** Possibility to analyze the impacts of the predicted business development (P&L positions) on capital requirements and therefore if necessary basis for analytic and strategic purposes