About

Product Performance Dashboards originally were created manually in Excel and it took more then a week each month. Now they are refershed daily, automatically.

There are more then 50 very complex calculations based on analyzis transactional data, analytical function, different levels of aggregation and sophisticated capping rules.

The calculation is performed in Redshift store procedures, views and Tableau dashboards.

My typical project:

- work with a business owner to get requirements/calculations/ideas
- add new or re-use existing fact tables/measures in Redshift data warehouse
- create Tableau dashboard
- reconcily data
- document in the workbook directly, documents in SharePoint, or in Atlan (Data Catalog)
- support and enhance

Process

	Source Data		Source Data		PPD Intermediate table		PPD Reporting table		PPD Reporting table
Claims	Mix of WINs and SPINN data with adjustments of amounts if a claim is present in both systems public vmfact		Montly summaries of public.vmfact_claimtra nsaction_blended		Claims data monthly summaries. There are some conversions in metrics and dimensional information comparing to the source table.		PPD Claim monthly metrics. The same dimensionality as in ppd_claim_summa ries, just dozens of complex metrics. It's used in a detail report via view.		PPD Claims aggregated metrics per month, product, subproduct, catastrophe flag and peril group. All of these dimensions are specific for PPD
	claimtransaction blended	>>>>	public vmfact claim blended	>>>>	reporting ppd claim summaries	>>>>	reporting ppd claims	>>>>	reporting ppd losses
					There is a major cond	dition to include	reportng.vppd Cla	aims Details	reperming plantesees
Policies	fsbi_dw_spinn. Fact_policycovera	age	>>>>		reporting ppd_polic PPD Policies aggregated metrics (Earned Premium and exposures) per month, product, subproduct. There is the same logic for product and subproduct as in Claims.	ies_summarie	s		
Configuration	n Coverages/Feature	e mapping in S	PINN	public.dim_cov	verageextension				
	Coverages/Feature	e mapping in W	/INs	fsbi_dw_wins.	ppd_feature_map_wins	3			
	Product Configurat	ion for Losses		reporting.vppd	_loss_product_mappin	ng			
	Product Configurat	ion for Premiu	ms and PIF	vppd_premium	n_product_mapping				

EE based coverages

Product/Subproduct	EE
	based on COMP coverage or COLL if COMP is
ALPD	missing
	- C
ALOTHER (AL excluding BI)	based on BI coverage
AL	based on BL coverage
AL	based on BI coverage
AL BI	based on BI coverage
	,
PersonalAuto	based on BI coverage
Home	based on CovA or CovC in the case of HO4 or HO6
Dwellling	based on CovA
Home Liability	based on CovA or CovC in the case of HO4 or HO6
Dwelling Liability	based on CovA
Dwelling Liability	based on CovA
AII	sum of EE from a specific product
Commoraid	based on 'CUMBR','BLDG' coverages
Commercial	pased of Colvida, blue coverages

Calculation	Formula	Aggregation level	Calculation Level	Calculation location	Source
	loss_paid + loss_reserve +				
	aoo_paid + dcc_paid +	month_id, claim_number,			
	aoo_reserve + dcc_reserve -	claimant, cat_flg, perilgroup,			
	salvage_received -	product,rag,feature_type,feature			
total_incurred_loss	subro_received	_map	1	reporting.ppd_claim_summaries	public.vmfact_claim_blended
		month_id, claim_number,			
		claimant, cat_flg, perilgroup,			
		product,rag,feature_type,feature			
loss_incurred	loss_paid + loss_reserve	_map	1	reporting.ppd_claim_summaries	public.vmfact_claim_blended
		month_id, claim_number,			
		claimant, cat_flg, perilgroup,			
	aoo paid + dcc paid +	product,rag,feature type,feature			
alae incurred	aoo reserve + dcc reserve	map	1	reporting.ppd claim summaries	public.vmfact claim blended
		month_id, claim_number,		SPECIAL DIFFERENCE TO SECURITION OF SECURITI	
		claimant, cat_flg, perilgroup,			
		product,rag,feature_type,feature			
alae paid	aoo_paid + dcc_paid	map	1	reporting.ppd_claim_summaries	public vmfact claim blended
uluc_pulu	acc_paid + acc_paid	month_id, claim_number,		reporting.ppa_ciann_summaries	
	salvage_received +	claimant, cat_flg, perilgroup,			
	salvage_reserve +	product,rag,feature_type,feature			
salsub incurred	subro_received + subro_reserve	map	1	reporting.ppd claim summaries	nublic vmfact, claim, blended
Suisub_incurred	Subro_received : Subro_reserve	month_id, claim_number,		reporting.ppa_ciaiii_saiiiiiiaiies	public.viiiiuct_ciuiiii_biciiucu
		claimant, cat_flg, perilgroup,			
	salvage_received +	product,rag,feature_type,feature			
salsub received	subro_received	map		reporting.ppd claim summaries	nublic ymfact, claim, blandad
Salsub_received	subio_received	month_id, claim_number,		reporting.ppu_ciaiii_summanes	public.viiiiact_claiiii_bleiided
		claimant, cat_flg, perilgroup,			
tatal gasamia	loss_reserve + aoo_reserve +	product,rag,feature_type,feature	1		sublic unifort claim blanded
total_reserve	dcc_reserve cumulative sum of	_map claim_number,rag,feature_type,	1	reporting.ppd_claim_summaries	public.vimact_claim_blended
	total_incurred_loss (feature map	feature_map,claimant order by	2		and determinants
feat_cumulative_total_incurred_	level)	month_id	2	reporting.ppd_claims	ppd_claim_summaries
		claim_number,rag,feature_type,			
		feature_map,claimant order by	2		and determined
feat_cumulative_total_reserve (fo	cumulative sum of total_reserve	month_id		reporting.ppd_claims	ppd_claim_summaries
		partition by			
		claim_number,rag,feature_type,			
.		feature_map,claimant order by	_] , ,
teat_cumulative_loss_incurred (for	cumulative sum of loss_incurred	month_id	2	reporting.ppd_claims	ppd_claim_summaries
	case when	[
	feat_cumulative_total_incurred_	claim_number,rag,feature_type,			
feat_reported_count	loss >= 0.5 then 1 else 0 end	feature_map,claimant	2	reporting.ppd_claims	ppd_claim_summaries

	case when	I			
	feat_cumulative_total_incurred_				
	loss >= 0.5 and				
		daim number rea feeture tune			
foot closed count	feat_cumulative_total_reserve < 0.5 then 1 else 0 end		2	reporting and claims	and claim summaries
feat_closed_count	l .	feature_map,claimant	2	reporting.ppd_claims	ppd_claim_summaries
	greatest(feat_reported_count -	claim_number,rag,feature_type,			
feat_open_count	feat_closed_count,0)	feature_map,claimant		reporting.ppd_claims	ppd_claim_summaries
	1 .				
	case when	l			
	feat_cumulative_total_incurred_	claim_number,rag,feature_type,			
feat_reported_count_100k	loss > 100000 then 1 else 0 end	feature_map,claimant	2	reporting.ppd_claims	ppd_claim_summaries
		partition by			
	cumulative sum of	claim_number,rag,feature_type			
clm_cumulative_total_incurred_l	total_incurred_loss	order by month_id	2	reporting.ppd_claims	ppd_claim_summaries
		partition by			
		claim_number,rag,feature_type			
clm_cumulative_loss_incurred (cl	cumulative sum of loss_incurred	order by month_id	2	reporting.ppd_claims	ppd_claim_summaries
		partition by			
		claim_number,rag,feature_type			
clm cumulative alae incurred (c	Cumulative sum of alae_incurred	order by month_id	2	reporting.ppd_claims	ppd_claim_summaries
`	_	partition by			= =
		claim_number,rag,feature_type,			
feat_cumulative_alae_incurred		feature_map,claimant order by			
(feature map level)	Cumulative sum of alae_incurred		2	reporting.ppd_claims	ppd_claim_summaries
(reatare map rever)	l	partition by		. c.p.o. tB.ppa_o.a	ppu_eiaeaaes
	Cumulative sum of	claim_number,rag,feature_type			
clm_cumulative_salsub_received		order by month_id	2	reporting.ppd_claims	ppd_claim_summaries
cini_cumulative_saisub_received	Jaijab_received	partition by		reporting.ppu_claims	ppu_ciaiii_suiiiiiaiies
		claim_number,rag,feature_type,			
feat_cumulative_salsub_receive	Cumulative sum of	feature_map,claimant order by			
d (feature map level)	salsub received	month id	2	reporting.ppd_claims	ppd_claim_summaries
d (leature map lever)	saisub_received	Infontin_id	2	reporting.ppu_ciains	ppu_ciaiiii_suiiiiiiaiies
	case				
	when				
	cast(clm_cumulative_total_incur				
	red_loss as float)=0 then 0				
	else				
	cast(feat_cumulative_total_incu				
	rred_loss as				
	float)/cast(clm_cumulative_total				
	_incurred_loss as float)	claim_number,rag,feature_type,			
ratio	end	feature_map,claimant,month_id	3	reporting.ppd_claims	ppd_claim_summaries
		partition by			
	least(clm_cumulative_total_incu	claim_number,rag,feature_type			
clm_capped_cumulative_total_in	rred_loss , 100000)	order by month_id	3	reporting.ppd_claims	ppd_claim_summaries
	•	•			

	case				
	when				
	clm_cumulative_total_incurred_				
	loss >100000 then				
	1033 >100000 then				
	ratio *clm_capped_cumulative_t				
	otal_incurred_100k				
	else				
	Cisc				
	feat_cumulative_total_incurred_				
	loss	claim_number,rag,feature_type,			
feat_capped_cumulative_total_ir		feature_map,claimant,month_id	4	reporting.ppd_claims	ppd_claim_summaries
reat_cappea_camalative_total_ii	Cita	reacare_map,claimant,finontil_ia		reporting.ppu_ciainis	ppa_ciaiii_saiiiiiaiies
		claim_number,rag,feature_type,			
feat_total_incurred_loss (feature	total incurred loss	feature_map,claimant,month_id	2	reporting.ppd_claims	ppd_claim_summaries
reat_total_incurred_loss (reature	total_incarred_ioss	reactive_map,claimant,month_la		reporting.ppu_claims	ppa_ciaiii_saiiiiiaiies
	case				
	when				
	clm_cumulative_total_incurred_				
	loss >100000 then				
	case when				
	cast(clm_cumulative_total_incur				
	red_loss as float)=0 then 0 else				
	feat_capped_cumulative_total_i				
	ncurred_100k *(cast(clm_cumul				
	ative_loss_incurred as				
	float)/cast(clm_cumulative_total				
	_ <i>incurred_loss</i> as float)) end				
	else				
	feat_cumulative_loss_incurred	claim_number,rag,feature_type,			
feat_capped_cumulative_loss_ind	end	feature_map,claimant,month_id	4	reporting.ppd_claims	ppd_claim_summaries

	I				
	case				
	when				
	clm_cumulative_total_incurred_				
	loss >100000 then				
	case when				
	cast(clm_cumulative_total_incur				
	red_loss as float)=0 then 0 else				
	feat_capped_cumulative_total_i				
	ncurred_100k*(cast(clm_cumul				
	ative_alae_incurred as				
	float)/cast(clm_cumulative_total				
	_incurred_loss as float)) end				
	else				
	eise				
	fort and latin also in a second	alain ann a faatan tara			
	feat_cumulative_alae_incurred	claim_number,rag,feature_type,			and determine
feat_capped_cumulative_alae_in	ena	feature_map,claimant,month_id	4	reporting.ppd_claims	ppd_claim_summaries
	case				
	when				
	clm_cumulative_total_incurred_				
	loss >100000 then				
	case when				
	cast(clm_cumulative_total_incur				
	red_loss as float)=0 then 0 else				
	feat_capped_cumulative_total_i				
	ncurred_100k *(cast(clm_cumul				
	ative_salsub_received as				
	float)/cast(clm_cumulative_total				
	_incurred_loss as float)) end				
	else				
	feat_cumulative_salsub_receive				
	d = = =	claim_number,rag,feature_type,			
feat_capped_cumulative_salsub_	end	feature_map,claimant,month_id	4	reporting.ppd_claims	ppd_claim_summaries
'		month_id,Product,subproduct,ca		. 5	<u> </u>
total_incurred	Month feat_total_incurred_loss	t_flg,perilgroup		reporting.ppd_losses	reporting.ppd_claims
	V	_ 0/1 0 * * 1	~	-1 0-1	0 111 - 1

	Difference between current and				
	previous month :				
	feat_capped_cumulative_loss_in				
	curred_100k +				
	feat_capped_cumulative_alae_i				
	ncurred_100k -				
		month_id,Product,subproduct,ca			
total incurred capped 100k	received 100k	t flg,perilgroup		reporting.ppd_losses	reporting.ppd_claims
	Difference between current and				SPECIAL OFFICE SECTION OF THE SECTIO
	previous month	month_id,Product,subproduct,ca			
reported_count	feat_reported_count	t_flg,perilgroup		reporting.ppd_losses	reporting.ppd_claims
	, <u></u>	month_id,Product,subproduct,ca			THE STREET
open_count	Month feat_open_count	t_flg,perilgroup		reporting.ppd_losses	reporting.ppd_claims
	Difference between current and				SPECIAL OFFICE SECTION OF THE SECTIO
	previous month	month_id,Product,subproduct,ca			
reported_count_100k	feat_reported_count_100k	t_flg,perilgroup		reporting.ppd_losses	reporting.ppd_claims
					1 011 =
	Earned Premium. SUM of EP of				
	all applicable to the product				
	defintion coverages. See BI Wiki				
	https://cseinsurance.sharepoint.				
	com/:x:/s/BI/EVM0nxx8UalBtPg				
	C_2rSkQ8BKOybAw89BJhwX5			reporting.ppd_policies_summari	fsbi_dw_spinn.fact_policycovera
EP	ZWaUXQ?e=ckJS8K for details	month_id,Product,subproduct		es	ge
	Earned Exposures Rm See EE				
	based coverages tab for more				
	details and BI Wiki				
	https://cseinsurance.sharepoint.				
	com/:p:/s/BI/EcoMfEAeElpGq5p				
	ztZOolDMBrYhI17zVawUKM5vaH			reporting.ppd_policies_summari	fsbi_dw_spinn.fact_policycovera
EE	bO_OQ?e=mQA6M7 for details	month_id,Product,subproduct	5	es	ge
	INF status and positive SUM				
	Inforced Amount (case when				
	s.polst_statuscd = 'INF' and				
	sum(f.term_prem_amt_itd)>0				
	then po.pol_policynumber else			reporting.ppd_policies_summari	fsbi_dw_spinn.fact_policycovera
PIF	null end)	month_id,Product,subproduct	5	es	ge
					join of
		12 Month Period, Product,			reporting.ppd_policies_summari
Frequency	reported_count/EE	Catastrophe, Peril Group	6	Tableau	es and reporting.ppd_losses

				l	
	12 month running average	12 Month Period, Product,			join of reporting.ppd_policies_summari
RA Frequency	Frequency	Catastrophe, Peril Group	6	Tableau	es and reporting.ppd_losses
Gross Incurred Severity	total_incurred/reported_count	12 Month Period, Product, Catastrophe, Peril Group	6	Tableau	join of reporting.ppd_policies_summari es and reporting.ppd_losses
RA Gross Incurred Severity	12 month running average Gross Incurred Severity	12 Month Period, Product, Catastrophe, Peril Group	6	Tableau	join of reporting.ppd_policies_summaries and reporting.ppd_losses
Gross Incurred PurePremium	total_incurred/EE	12 Month Period, Product, Catastrophe, Peril Group	6	Tableau	join of reporting.ppd_policies_summari es and reporting.ppd_losses
RA Gross Incurred PurePremium	12 month running average Gross Incurred PurePremium	12 Month Period, Product, Catastrophe, Peril Group	6	Tableau	join of reporting.ppd_policies_summari es and reporting.ppd_losses
Gross Incurred Loss Ratio	total_incurred/EP	12 Month Period, Product, Catastrophe, Peril Group	6	Tableau	join of reporting.ppd_policies_summari es and reporting.ppd_losses
RA Gross Incurred Loss Ratio	12 month running average Gross Incurred Loss Ratio	12 Month Period, Product, Catastrophe, Peril Group	6	Tableau	join of reporting.ppd_policies_summari es and reporting.ppd_losses
Capped Incurred Severity	total_incurred_capped_100k/rep orted_count	12 Month Period, Product, Catastrophe, Peril Group	6	Tableau	join of reporting.ppd_policies_summari es and reporting.ppd_losses
RA Capped Incurred Severity	12 month running average Capped Incurred Severity	12 Month Period, Product, Catastrophe, Peril Group	6	Tableau	join of reporting.ppd_policies_summari es and reporting.ppd_losses
Capped Gross Incurred Loss Ratio	total_incurred_capped_100k/EP	12 Month Period, Product, Catastrophe, Peril Group	6	Tableau	join of reporting.ppd_policies_summari es and reporting.ppd_losses
RA Capped Gross Incurred Loss R	a 12 month running average Cappe	12 Month Period, Product, Catastrophe, Peril Group	6	Tableau	join of reporting.ppd_policies_summari es and reporting.ppd_losses

			1	<u> </u>	
					join of
		12 Month Period, Product,			reporting.ppd_policies_summari
Inventory	open_count	Catastrophe, Peril Group	6	Tableau	es and reporting.ppd_losses
		42 Manually Day Stands Broadward			join of
		12 Month Period, Product,		Table	reporting.ppd_policies_summari
Open Count per PIF	open_count/PIF	Catastrophe, Peril Group	<u> </u>	Tableau	es and reporting.ppd_losses
					join of
		12 Month Period, Product,			reporting.ppd_policies_summari
Large Loss Count	reported count 100k	Catastrophe, Peril Group	6	Tableau	es and reporting.ppd_losses
Large 2033 Count	reported_codint_100K	Catastrophic, Ferri Group	Ť	Tubledd	es una reporting.ppa_iosses
					join of
	12 month running average Large	12 Month Period, Product,			reporting.ppd_policies_summari
RA Large Loss Count	Loss Count	Catastrophe, Peril Group	6	Tableau	es and reporting.ppd_losses
				Monthly Claims details Tableau	
				dashboard /	reporting.ppd_claims.feat_total_
Incurred This Month	incurred	N/A	6	reporting.vppd_Claims_Details	incurred_loss
				Monthly Claims details Tableau	
				dashboard /	reporting.ppd_claims.feat_loss_i
Indemnity This Month	loss_incurred	N/A	6	reporting.vppd_Claims_Details	ncurred
				NA - while Claims details Tables.	
				Monthly Claims details Tableau dashboard /	reporting.ppd_claims.cumulative
ITD Indomnity	cumulative_loss_incurred	N/A		reporting.vppd_Claims_Details	_loss_incurred
ITD Indemnity	cumulative_loss_incurred	IN/A	0	reporting.vppa_ciains_betails	_loss_iliculted
				Monthly Claims details Tableau	
				dashboard /	reporting.ppd_claims.feat_alae_i
ALAE This Month	alae incurred	N/A	6	reporting.vppd_Claims_Details	Incurred
	_				
				Monthly Claims details Tableau	
				dashboard /	reporting.ppd_claims.feat_cumu
ITD ALAE	cumulative_alae_incurred	N/A	6	reporting.vppd_Claims_Details	lative_alae_incurred
					reporting.ppd_claims.feat_loss_i
				Monthly Claims details Tableau	ncurred +
				dashboard /	reporting.ppd_claims.feat_alae_i
Indemnity + ALAE This Month	loss_alae_incurred	N/A	6	reporting.vppd_Claims_Details	ncurred
					reporting.ppd_claims.feat_cumu
				Monthly Claims details Tableau	lative_loss_incurred +
ITD to describe a 41.45	I	l.,,	_	dashboard /	reporting.ppd_claims.feat_cumu
ITD Indemnity + ALAE	cumulative_loss_alae_incurred	N/A	1 6	reporting.vppd_Claims_Details	lative_alae_incurred

	case	I			
	when				
	feat_reported_count_current_m				
	onth=1 and				
	feat_reported_count_prev_mont				
	h=1 then 'Reported in prior				
	months'				
	when				
	feat_reported_count_current_m				
	onth=0 and				
	feat_reported_count_prev_mont				
	h=0 then 'Reported in prior				
	months'				
	when				
	feat_reported_count_current_m				
	onth=1 and				
	feat_reported_count_prev_mont				
	h=0 then 'Reported in current				
	month'				
	when				
	feat_reported_count_current_m				
	onth=0 and				
	feat_reported_count_prev_mont				
	h=1 then 'Closed No-Pay in			Monthly Claims details Tableau	
	current month'			dashboard /	
is Reported	end isreported,	N/A			reporting.ppd_claims
·					
				Monthly Claims details Tableau	
					reporting.ppd_claims.feat_open
is Open	open_count	N/A		reporting.vppd_Claims_Details	_count
				Monthly Claims details Tableau	
					reporting.ppd_claims.feat_repor
is Large Losses	reported_count_100k	N/A	6	reporting.vppd_Claims_Details	ted_count_100k