Distribution Exact Savings Choices Vectorized

This is the example vignette for function: **snw_ds_main_vec** from the **PrjOptiSNW Package**. This function solves for vfi and gets distribution induced by policy functions and exogenous distributions. Vectorized vfi and distribution methods.

Test SNW_DS_MAIN_VEC

Call the function with testing defaults.

```
mp_params = snw_mp_param('default_docdense');
mp_controls = snw_mp_control('default_test');
mp_controls('bl_print_vfi') = false;
mp_controls('bl_print_ds') = true;
mp_controls('bl_print_ds_verbose') = false;
[Phi_true,Phi_adj,A_agg,Y_inc_agg,it,mp_dsvfi_results] = snw_ds_main_vec(mp_params, mp_controls
```

```
Completed SNW_VFI_MAIN_BISEC_VEC;SNW_MP_PARAM=default_docdense;SNW_MP_CONTROL=default_test;time=521.9152
----------------------------------------
xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
CONTAINER NAME: mp_outcomes ND Array (Matrix etc)
xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
```

	i	idx	ndim	numel	rowN	colN	sum	mean	std	coefvari
V_VFI	1	1	6	4.37e+07	83	5.265e+05	-1.5339e+08	-3.5101	26.119	-7.441
ap_VFI	2	2	6	4.37e+07	83	5.265e+05	1.4159e+09	32.402	36.798	1.1357
cons_VFI	3	3	6	4.37e+07	83	5.265e+05	2.1402e+08	4.8975	8.3294	1.7007

xxx TABLE:V_VFI xxxxxxxxxxxxxxxxxxx

	c1	c2	c3	c4	c5	c526496	c526497	c526498	c526499	c52650
r1	-346.51	-346.12	-343.63	-337.86	-328.51	21.702	21.852	22.003	22.154	22.30
r2	-334.38	-333.99	-331.51	-325.83	-316.83	21.724	21.869	22.015	22.163	22.31
r3	-322.45	-322.06	-319.6	-314.14	-305.6	21.745	21.885	22.027	22.171	22.31
r4	-310.63	-310.27	-307.99	-302.88	-294.87	21.767	21.903	22.041	22.182	22.32
r5	-299.94	-299.6	-297.46	-292.67	-285.12	21.775	21.907	22.042	22.18	22.32
r79	-9.9437	-9.9325	-9.8557	-9.6597	-9.3232	2.5394	2.5501	2.5602	2.5696	2.578
r80	-8.9023	-8.8911	-8.8143	-8.6183	-8.2818	2.3039	2.3121	2.3198	2.327	2.333
r81	-7.6363	-7.6251	-7.5484	-7.3524	-7.0159	2.0068	2.0124	2.0176	2.0226	2.027
r82	-5.9673	-5.9561	-5.8793	-5.6833	-5.3468	1.5958	1.5989	1.6018	1.6046	1.607
r83	-3.5892	-3.578	-3.5012	-3.3052	-2.9687	0.97904	0.98004	0.98097	0.98185	0.9826

xxx TABLE:ap_VFI xxxxxxxxxxxxxxxxxxx

	c1	c2	c3	c4	c5	c526496	c526497	c526498	c526499	c526500
r1	0	0	0.0005656	0.0075134	0.022901	114.75	120.41	126.27	132.38	138.8
r2	0	0	0.00051498	0.0065334	0.021549	114.86	120.53	126.41	132.54	138.95
r3	0	0	0.00051498	0.0049294	0.019875	114.97	120.65	126.56	132.7	139.12
r4	0	0	0.00051498	0.0047937	0.019672	115.73	121.42	127.34	133.51	139.92
r5	0	0	0.00048517	0.0046683	0.019484	116.5	122.21	128.15	134.32	140.74
r79	0	0	0	0	0	81.091	85.68	90.335	94.378	98.419
r80	0	0	0	0	0	76.669	80.563	84.304	88.04	91.693
r81	0	0	0	0	0	68.313	71.534	74.475	77.832	81.11
r82	0	0	0	0	0	50.126	53.467	56.953	58.745	60.587
r83	0	0	0	0	0	0	0	0	0	0

xxx TABLE:cons_VFI xxxxxxxxxxxxxxxxxxx

	c1	c2	c3	c4	c5	c526496	c526497	c526498	c526499
r1	0.036717	0.037251	0.040426	0.04363	0.048012	9.6491	9.817	9.9649	10.073
r2	0.036717	0.037251	0.040477	0.04461	0.049364	9.8118	9.9685	10.101	10.191
r3	0.036717	0.037251	0.040477	0.046214	0.051039	9.9779	10.12	10.234	10.302
r4	0.038144	0.038678	0.041903	0.047776	0.052666	10.131	10.258	10.354	10.405
r5	0.039534	0.040068	0.043323	0.04929	0.054241	10.272	10.384	10.463	10.5
r79	0.2179	0.21844	0.22216	0.23228	0.25197	35.858	37.092	38.455	40.627
r80	0.2179	0.21844	0.22216	0.23228	0.25197	40.253	42.183	44.459	46.938
r81	0.2179	0.21844	0.22216	0.23228	0.25197	48.587	51.19	54.266	57.123
r82	0.2179	0.21844	0.22216	0.23228	0.25197	66.755	69.238	71.77	76.192
r83	0.2179	0.21844	0.22216	0.23228	0.25197	116.87	122.69	128.71	134.92

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SNW_DS_MAIN_VEC ACUMU MASS: Finished Age Group:1 of 82, time-this-age:0.39334
SNW_DS_MAIN_VEC ACUMU MASS: Finished Age Group:2 of 82, time-this-age:4.11
SNW_DS_MAIN_VEC ACUMU MASS: Finished Age Group:3 of 82, time-this-age:4.9795
SNW_DS_MAIN_VEC ACUMU MASS: Finished Age Group:4 of 82, time-this-age:5.3519
SNW_DS_MAIN_VEC ACUMU MASS: Finished Age Group:5 of 82, time-this-age:5.7236
SNW_DS_MAIN_VEC ACUMU MASS: Finished Age Group:6 of 82, time-this-age:6.4229
SNW_DS_MAIN_VEC ACUMU MASS: Finished Age Group:7 of 82, time-this-age:6.6064
SNW_DS_MAIN_VEC ACUMU MASS: Finished Age Group:8 of 82, time-this-age:7.5306
SNW_DS_MAIN_VEC ACUMU MASS: Finished Age Group:9 of 82, time-this-age:7.3481
SNW_DS_MAIN_VEC ACUMU MASS: Finished Age Group:10 of 82, time-this-age:8.459
SNW_DS_MAIN_VEC ACUMU MASS: Finished Age Group:11 of 82, time-this-age:9.3302
SNW_DS_MAIN_VEC ACUMU MASS: Finished Age Group:12 of 82, time-this-age:10.5009
SNW_DS_MAIN_VEC ACUMU MASS: Finished Age Group:13 of 82, time-this-age:10.7123
SNW_DS_MAIN_VEC ACUMU MASS: Finished Age Group:14 of 82, time-this-age:10.6775
SNW_DS_MAIN_VEC ACUMU MASS: Finished Age Group:15 of 82, time-this-age:10.822
SNW_DS_MAIN_VEC ACUMU MASS: Finished Age Group:16 of 82, time-this-age:10.7687
SNW_DS_MAIN_VEC ACUMU MASS: Finished Age Group:17 of 82, time-this-age:11.4006
SNW_DS_MAIN_VEC ACUMU MASS: Finished Age Group:18 of 82, time-this-age:11.2548
SNW_DS_MAIN_VEC ACUMU MASS: Finished Age Group:19 of 82, time-this-age:11.2997
SNW_DS_MAIN_VEC ACUMU MASS: Finished Age Group:20 of 82, time-this-age:10.8026
SNW_DS_MAIN_VEC ACUMU MASS: Finished Age Group:21 of 82, time-this-age:10.7659
SNW_DS_MAIN_VEC ACUMU MASS: Finished Age Group:22 of 82, time-this-age:12.0397
SNW_DS_MAIN_VEC ACUMU MASS: Finished Age Group:23 of 82, time-this-age:12.6411
SNW_DS_MAIN_VEC ACUMU MASS: Finished Age Group:24 of 82, time-this-age:12.6029
SNW_DS_MAIN_VEC ACUMU MASS: Finished Age Group:25 of 82, time-this-age:11.8189
SNW_DS_MAIN_VEC ACUMU MASS: Finished Age Group:26 of 82, time-this-age:12.0551
SNW_DS_MAIN_VEC ACUMU MASS: Finished Age Group:27 of 82, time-this-age:13.04
SNW_DS_MAIN_VEC ACUMU MASS: Finished Age Group:28 of 82, time-this-age:13.2314
SNW_DS_MAIN_VEC ACUMU MASS: Finished Age Group:29 of 82, time-this-age:13.0356
SNW_DS_MAIN_VEC ACUMU MASS: Finished Age Group:30 of 82, time-this-age:13.5628
SNW_DS_MAIN_VEC ACUMU MASS: Finished Age Group:31 of 82, time-this-age:12.8784
SNW_DS_MAIN_VEC ACUMU MASS: Finished Age Group:32 of 82, time-this-age:12.7042
SNW_DS_MAIN_VEC ACUMU MASS: Finished Age Group:33 of 82, time-this-age:12.7287
SNW_DS_MAIN_VEC ACUMU MASS: Finished Age Group:34 of 82, time-this-age:12.9463
SNW_DS_MAIN_VEC ACUMU MASS: Finished Age Group:35 of 82, time-this-age:13.1275
SNW_DS_MAIN_VEC ACUMU MASS: Finished Age Group:36 of 82, time-this-age:12.6388
SNW_DS_MAIN_VEC ACUMU MASS: Finished Age Group:37 of 82, time-this-age:12.447
SNW_DS_MAIN_VEC ACUMU MASS: Finished Age Group:38 of 82, time-this-age:12.2203
SNW_DS_MAIN_VEC ACUMU MASS: Finished Age Group:39 of 82, time-this-age:12.3884
SNW_DS_MAIN_VEC ACUMU MASS: Finished Age Group:40 of 82, time-this-age:12.3557
SNW_DS_MAIN_VEC ACUMU MASS: Finished Age Group:41 of 82, time-this-age:12.944
SNW_DS_MAIN_VEC ACUMU MASS: Finished Age Group:42 of 82, time-this-age:12.2436
SNW_DS_MAIN_VEC ACUMU MASS: Finished Age Group:43 of 82, time-this-age:12.2168
SNW_DS_MAIN_VEC ACUMU MASS: Finished Age Group:44 of 82, time-this-age:12.6599
SNW_DS_MAIN_VEC ACUMU MASS: Finished Age Group:45 of 82, time-this-age:12.245
SNW_DS_MAIN_VEC ACUMU MASS: Finished Age Group:46 of 82, time-this-age:11.7744
SNW_DS_MAIN_VEC ACUMU MASS: Finished Age Group:47 of 82, time-this-age:11.5828
SNW_DS_MAIN_VEC ACUMU MASS: Finished Age Group:48 of 82, time-this-age:11.4646
SNW_DS_MAIN_VEC ACUMU MASS: Finished Age Group:49 of 82, time-this-age:14.0227
SNW_DS_MAIN_VEC ACUMU MASS: Finished Age Group:50 of 82, time-this-age:14.6851
SNW_DS_MAIN_VEC ACUMU MASS: Finished Age Group:51 of 82, time-this-age:14.7491
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SNW_DS_MAIN_VEC ACUMU MASS: Finished Age Group:52 of 82, time-this-age:14.7967
SNW_DS_MAIN_VEC ACUMU MASS: Finished Age Group:53 of 82, time-this-age:14.6515
SNW_DS_MAIN_VEC ACUMU MASS: Finished Age Group:54 of 82, time-this-age:14.7403
SNW_DS_MAIN_VEC ACUMU MASS: Finished Age Group:55 of 82, time-this-age:14.6048
SNW_DS_MAIN_VEC ACUMU MASS: Finished Age Group:56 of 82, time-this-age:13.3352
SNW_DS_MAIN_VEC ACUMU MASS: Finished Age Group:57 of 82, time-this-age:14.5598
SNW_DS_MAIN_VEC ACUMU MASS: Finished Age Group:58 of 82, time-this-age:12.7411
SNW_DS_MAIN_VEC ACUMU MASS: Finished Age Group:59 of 82, time-this-age:11.6125
SNW_DS_MAIN_VEC ACUMU MASS: Finished Age Group:60 of 82, time-this-age:11.7255
SNW_DS_MAIN_VEC ACUMU MASS: Finished Age Group:61 of 82, time-this-age:11.2633
SNW_DS_MAIN_VEC ACUMU MASS: Finished Age Group:62 of 82, time-this-age:10.2443
SNW_DS_MAIN_VEC ACUMU MASS: Finished Age Group:63 of 82, time-this-age:10.0437
SNW_DS_MAIN_VEC ACUMU MASS: Finished Age Group:64 of 82, time-this-age:8.4077
SNW_DS_MAIN_VEC ACUMU MASS: Finished Age Group:65 of 82, time-this-age:7.7489
SNW_DS_MAIN_VEC ACUMU MASS: Finished Age Group:66 of 82, time-this-age:7.8557
SNW_DS_MAIN_VEC ACUMU MASS: Finished Age Group:67 of 82, time-this-age:8.0619
SNW_DS_MAIN_VEC ACUMU MASS: Finished Age Group:68 of 82, time-this-age:7.7275
SNW_DS_MAIN_VEC ACUMU MASS: Finished Age Group:69 of 82, time-this-age:7.8023
SNW_DS_MAIN_VEC ACUMU MASS: Finished Age Group:70 of 82, time-this-age:7.3455
SNW_DS_MAIN_VEC ACUMU MASS: Finished Age Group:71 of 82, time-this-age:7.3573
SNW_DS_MAIN_VEC ACUMU MASS: Finished Age Group:72 of 82, time-this-age:6.9026
SNW_DS_MAIN_VEC ACUMU MASS: Finished Age Group:73 of 82, time-this-age:6.897
SNW_DS_MAIN_VEC ACUMU MASS: Finished Age Group:74 of 82, time-this-age:6.4436
SNW_DS_MAIN_VEC ACUMU MASS: Finished Age Group:75 of 82, time-this-age:6.5685
SNW_DS_MAIN_VEC ACUMU MASS: Finished Age Group:76 of 82, time-this-age:6.0098
SNW_DS_MAIN_VEC ACUMU MASS: Finished Age Group:77 of 82, time-this-age:6.0711
SNW_DS_MAIN_VEC ACUMU MASS: Finished Age Group:78 of 82, time-this-age:6.045
SNW_DS_MAIN_VEC ACUMU MASS: Finished Age Group:79 of 82, time-this-age:5.8093
SNW_DS_MAIN_VEC ACUMU MASS: Finished Age Group:80 of 82, time-this-age:5.4826
SNW_DS_MAIN_VEC ACUMU MASS: Finished Age Group:81 of 82, time-this-age:5.133
SNW_DS_MAIN_VEC ACUMU MASS: Finished Age Group:82 of 82, time-this-age:4.7325
SNW_DS_MAIN NORMALIZE MASS: Finished Age Group:1 of 82, time-this-age:0.34351
SNW_DS_MAIN NORMALIZE MASS: Finished Age Group:2 of 82, time-this-age:0.057964
SNW_DS_MAIN NORMALIZE MASS: Finished Age Group:3 of 82, time-this-age:0.047239
SNW_DS_MAIN NORMALIZE MASS: Finished Age Group:4 of 82, time-this-age:0.046663
SNW_DS_MAIN NORMALIZE MASS: Finished Age Group:5 of 82, time-this-age:0.047701
SNW_DS_MAIN NORMALIZE MASS: Finished Age Group:6 of 82, time-this-age:0.046611
SNW_DS_MAIN NORMALIZE MASS: Finished Age Group:7 of 82, time-this-age:0.04627
SNW_DS_MAIN NORMALIZE MASS: Finished Age Group:8 of 82, time-this-age:0.047136
SNW_DS_MAIN NORMALIZE MASS: Finished Age Group:9 of 82, time-this-age:0.046887
SNW_DS_MAIN NORMALIZE MASS: Finished Age Group:10 of 82, time-this-age:0.047342
SNW_DS_MAIN NORMALIZE MASS: Finished Age Group:11 of 82, time-this-age:0.046719
SNW_DS_MAIN NORMALIZE MASS: Finished Age Group:12 of 82, time-this-age:0.046569
SNW_DS_MAIN NORMALIZE MASS: Finished Age Group:13 of 82, time-this-age:0.047564
SNW_DS_MAIN NORMALIZE MASS: Finished Age Group:14 of 82, time-this-age:0.056209
SNW_DS_MAIN NORMALIZE MASS: Finished Age Group:15 of 82, time-this-age:0.051448
SNW_DS_MAIN NORMALIZE MASS: Finished Age Group:16 of 82, time-this-age:0.049786
SNW_DS_MAIN NORMALIZE MASS: Finished Age Group:17 of 82, time-this-age:0.051129
SNW_DS_MAIN NORMALIZE MASS: Finished Age Group:18 of 82, time-this-age:0.047445
SNW_DS_MAIN NORMALIZE MASS: Finished Age Group:19 of 82, time-this-age:0.046665
SNW_DS_MAIN NORMALIZE MASS: Finished Age Group:20 of 82, time-this-age:0.042283
SNW_DS_MAIN NORMALIZE MASS: Finished Age Group:21 of 82, time-this-age:0.041394
SNW_DS_MAIN NORMALIZE MASS: Finished Age Group:22 of 82, time-this-age:0.043719
SNW_DS_MAIN NORMALIZE MASS: Finished Age Group:23 of 82, time-this-age:0.042114
SNW_DS_MAIN NORMALIZE MASS: Finished Age Group:24 of 82, time-this-age:0.04228
SNW_DS_MAIN NORMALIZE MASS: Finished Age Group:25 of 82, time-this-age:0.043025
SNW_DS_MAIN NORMALIZE MASS: Finished Age Group:26 of 82, time-this-age:0.043165
SNW_DS_MAIN NORMALIZE MASS: Finished Age Group:27 of 82, time-this-age:0.041725
SNW_DS_MAIN NORMALIZE MASS: Finished Age Group:28 of 82, time-this-age:0.041071
SNW_DS_MAIN NORMALIZE MASS: Finished Age Group:29 of 82, time-this-age:0.040883
SNW_DS_MAIN NORMALIZE MASS: Finished Age Group:30 of 82, time-this-age:0.041196
SNW_DS_MAIN NORMALIZE MASS: Finished Age Group:31 of 82, time-this-age:0.041031
SNW_DS_MAIN NORMALIZE MASS: Finished Age Group:32 of 82, time-this-age:0.040506
SNW_DS_MAIN NORMALIZE MASS: Finished Age Group:33 of 82, time-this-age:0.039983
SNW_DS_MAIN NORMALIZE MASS: Finished Age Group:34 of 82, time-this-age:0.040024
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SNW_DS_MAIN NORMALIZE MASS: Finished Age Group:35 of 82, time-this-age:0.040669
SNW_DS_MAIN NORMALIZE MASS: Finished Age Group:36 of 82, time-this-age:0.041376
SNW_DS_MAIN NORMALIZE MASS: Finished Age Group:37 of 82, time-this-age:0.042021
SNW_DS_MAIN NORMALIZE MASS: Finished Age Group:38 of 82, time-this-age:0.044166
SNW_DS_MAIN NORMALIZE MASS: Finished Age Group:39 of 82, time-this-age:0.041754
SNW_DS_MAIN NORMALIZE MASS: Finished Age Group:40 of 82, time-this-age:0.0415
SNW_DS_MAIN NORMALIZE MASS: Finished Age Group:41 of 82, time-this-age:0.041418
SNW_DS_MAIN NORMALIZE MASS: Finished Age Group:42 of 82, time-this-age:0.042098
SNW_DS_MAIN NORMALIZE MASS: Finished Age Group:43 of 82, time-this-age:0.042974
SNW_DS_MAIN NORMALIZE MASS: Finished Age Group:44 of 82, time-this-age:0.040936
SNW_DS_MAIN NORMALIZE MASS: Finished Age Group:45 of 82, time-this-age:0.042504
SNW_DS_MAIN NORMALIZE MASS: Finished Age Group:46 of 82, time-this-age:0.041483
SNW_DS_MAIN NORMALIZE MASS: Finished Age Group:47 of 82, time-this-age:0.041756
SNW_DS_MAIN NORMALIZE MASS: Finished Age Group:48 of 82, time-this-age:0.041055
SNW_DS_MAIN NORMALIZE MASS: Finished Age Group:49 of 82, time-this-age:0.041493
SNW_DS_MAIN NORMALIZE MASS: Finished Age Group:50 of 82, time-this-age:0.042181
SNW_DS_MAIN NORMALIZE MASS: Finished Age Group:51 of 82, time-this-age:0.042668
SNW_DS_MAIN NORMALIZE MASS: Finished Age Group:52 of 82, time-this-age:0.041988
SNW_DS_MAIN NORMALIZE MASS: Finished Age Group:53 of 82, time-this-age:0.05308
SNW_DS_MAIN NORMALIZE MASS: Finished Age Group:54 of 82, time-this-age:0.040945
SNW_DS_MAIN NORMALIZE MASS: Finished Age Group:55 of 82, time-this-age:0.040438
SNW_DS_MAIN NORMALIZE MASS: Finished Age Group:56 of 82, time-this-age:0.039873
SNW_DS_MAIN NORMALIZE MASS: Finished Age Group:57 of 82, time-this-age:0.039668
SNW_DS_MAIN NORMALIZE MASS: Finished Age Group:58 of 82, time-this-age:0.039572
SNW_DS_MAIN NORMALIZE MASS: Finished Age Group:59 of 82, time-this-age:0.039795
SNW_DS_MAIN NORMALIZE MASS: Finished Age Group:60 of 82, time-this-age:0.039983
SNW_DS_MAIN NORMALIZE MASS: Finished Age Group:61 of 82, time-this-age:0.039467
SNW_DS_MAIN NORMALIZE MASS: Finished Age Group:62 of 82, time-this-age:0.03986
SNW_DS_MAIN NORMALIZE MASS: Finished Age Group:63 of 82, time-this-age:0.040713
SNW_DS_MAIN NORMALIZE MASS: Finished Age Group:64 of 82, time-this-age:0.040873
SNW_DS_MAIN NORMALIZE MASS: Finished Age Group:65 of 82, time-this-age:0.040731
SNW_DS_MAIN NORMALIZE MASS: Finished Age Group:66 of 82, time-this-age:0.040093
SNW_DS_MAIN NORMALIZE MASS: Finished Age Group:67 of 82, time-this-age:0.03951
SNW_DS_MAIN NORMALIZE MASS: Finished Age Group:68 of 82, time-this-age:0.040165
SNW_DS_MAIN NORMALIZE MASS: Finished Age Group:69 of 82, time-this-age:0.039594
SNW_DS_MAIN NORMALIZE MASS: Finished Age Group:70 of 82, time-this-age:0.044621
SNW_DS_MAIN NORMALIZE MASS: Finished Age Group:71 of 82, time-this-age:0.039819
SNW_DS_MAIN NORMALIZE MASS: Finished Age Group:72 of 82, time-this-age:0.040101
SNW_DS_MAIN NORMALIZE MASS: Finished Age Group:73 of 82, time-this-age:0.039792
SNW_DS_MAIN NORMALIZE MASS: Finished Age Group:74 of 82, time-this-age:0.039931
SNW_DS_MAIN NORMALIZE MASS: Finished Age Group:75 of 82, time-this-age:0.039789
SNW_DS_MAIN NORMALIZE MASS: Finished Age Group:76 of 82, time-this-age:0.039697
SNW_DS_MAIN NORMALIZE MASS: Finished Age Group:77 of 82, time-this-age:0.039328
SNW_DS_MAIN NORMALIZE MASS: Finished Age Group:78 of 82, time-this-age:0.039731
SNW_DS_MAIN NORMALIZE MASS: Finished Age Group:79 of 82, time-this-age:0.041404
SNW_DS_MAIN NORMALIZE MASS: Finished Age Group:80 of 82, time-this-age:0.05228
SNW_DS_MAIN NORMALIZE MASS: Finished Age Group:81 of 82, time-this-age:0.040807
SNW_DS_MAIN NORMALIZE MASS: Finished Age Group:82 of 82, time-this-age:0.040525
SNW_DS_MAIN NORMALIZE MASS: Finished Age Group:83 of 82, time-this-age:0.041202
SNW_DS_MAIN: Share of population with assets equal to upper bound on asset grid:6.6266e-06
SNW_DS_MAIN: Accidental bequests are thrown in the ocean
SNW_DS_MAIN_VEC: Number of a2-adjustments (for taxation) used to balance the government budget= 0
SNW_DS_MAIN_VEC: Old and updated value of a2=1.5286      1.5286
SNW_DS_MAIN_VEC: Aggregates: Cons., Gov. cons., Save, Assets, Income, Bequests 48.88966      11.38831      194.5563
SNW_DS_MAIN_VEC: Resource constraint: C_t+A_{t+1}+G_t=A_t+Y_t 259.3534      259.3526
Completed SNW_DS_MAIN_VEC;SNW_MP_PARAM=default_docdense;SNW_MP_CONTROL=default_test;time=878.3792
xxx tb_outcomes: all stats xxx
```

OriginalVariableNames	a_ss	ap_ss	cons_ss	n_ss	y_all	y_head_inc	y
{'mean' }	4.2486	4.3473	1.0676	2.3554	1.4672	1.1087	
{'unweighted_sum' }	2228	5.3198e+08	5.0976e+07	21	8.3563e+07	1.9253e+06	
{'sd' }	6.7963	6.834	0.69454	1.4375	1.4636	1.0092	
{'coefofvar' }	1.5996	1.572	0.65055	0.61029	0.99755	0.91029	
{'gini' }	0.68054	0.68147	0.3385	0.3128	0.44353	0.41889	

{'min'	}	0	0	0.036717	1	0.038108	0.038108	
{'max'	}	135	163.7	141.66	6	50.873	24.357	
{'pYis0'	}	0.1223	0.10225	0	0	0	0	
{'pYls0'	}	0	0	0	0	0	0	
{'pYgr0'	}	0.8777	0.89775	1	1	1	1	
{'pYisMINY'	}	0.1223	0.10225	8.6094e-07	0.36005	8.6094e-07	1.2258e-06	
{'pYisMAXY'	}	6.6266e-06	2.2031e-12	0	0.041101	2.2031e-12	1.641e-09	1
{'p0_01'	}	0	0	0.066316	1	0.069931	0.065666	
{'p0_1'	}	0	0	0.10404	1	0.11208	0.1034	
{'p1'	}	0	0	0.185	1	0.20291	0.17983	
{'p5'	}	0	0	0.27653	1	0.28	0.25935	
{'p10'	}	0	0	0.35932	1	0.35446	0.31385	
{'p20'	}	0.064373	0.070044	0.49736	1	0.50155	0.41397	
{'p25'	}	0.11124	0.18238	0.56384	1	0.5774	0.46885	
{'p30'	}	0.26367	0.37542	0.63117	1	0.65517	0.5291	
{'p40'	}	0.68544	0.85525	0.77036	2	0.8305	0.65232	
{'p50'	}	1.4131	1.5959	0.92038	2	1.0329	0.80051	
{'p60'	}	2.5301	2.7681	1.086	2	1.2828	0.98453	
{'p70'	}	4.1199	4.5042	1.2802	3	1.6166	1.2256	
{'p75'	}	5.4836	5.7337	1.3961	3	1.8353	1.3831	
{'p80'	}	7.1191	7.2583	1.5324	4	2.1144	1.5829	
{'p90'	}	12.56	12.145	1.9406	5	3.0534	2.2473	
{'p95'	}	16.875	17.551	2.3509	5	4.0423	2.9873	
{'p99'	}	30.548	31.57	3.4062	6	6.9038	5.03	
{'p99_9'	}	56.953	57.547	5.2994	6	14.807	8.8596	
{'p99_99'	}	90.439	90.439	7.5689	6	21.018	13.695	
{'fl_cov_a_ss'	}	46.189	46.181	3.4533	-1.4145	4.552	3.9111	
{'fl_cor_a_ss'	}	1	0.99429	0.73158	-0.14479	0.45762	0.57021	
{'fl_cov_ap_ss'	}	46.181	46.704	3.5562	-1.3778	5.3963	4.1925	
{'fl_cor_ap_ss'	}	0.99429	1	0.74922	-0.14025	0.53951	0.60786	
{'fl_cov_cons_ss'	}	3.4533	3.5562	0.48239	0.23887	0.77192	0.5697	
{'fl_cor_cons_ss'	}	0.73158	0.74922	1	0.23926	0.75937	0.81274	
{'fl_cov_n_ss'	}	-1.4145	-1.3778	0.23887	2.0664	0.36008	0.092861	
{'fl_cor_n_ss'	}	-0.14479	-0.14025	0.23926	1	0.17115	0.064008	
{'fl_cov_y_all'	}	4.552	5.3963	0.77192	0.36008	2.1421	1.1244	
{'fl_cor_y_all'	}	0.45762	0.53951	0.75937	0.17115	1	0.7612	
{'fl_cov_y_head_inc'	}	3.9111	4.1925	0.5697	0.092861	1.1244	1.0186	
{'fl_cor_y_head_inc'	}	0.57021	0.60786	0.81274	0.064008	0.7612	1	
{'fl_cov_y_head_earn'	}	1.9006	2.2089	0.43359	0.19345	0.97967	0.891	
{'fl_cor_y_head_earn'	}	0.30133	0.34828	0.67268	0.14501	0.72126	0.95129	
{'fl_cov_y_spouse_inc'	}	0.64085	1.2037	0.20222	0.26722	1.0177	0.10581	
{'fl_cor_y_spouse_inc'	}	0.098743	0.18445	0.3049	0.19466	0.72817	0.10979	
{'fl_cov_yshr_interest'	}	0.77027	0.72501	0.038411	-0.066855	-0.0092638	0.0068725	
{'fl_cor_yshr_interest'	}	0.67438	0.63125	0.32907	-0.27673	-0.037662	0.040518	
{'fl_cov_yshr_wage'	}	-0.77963	-0.69253	-0.0045925	0.17059	0.10778	0.062723	
{'fl_cor_yshr_wage'	}	-0.3398	-0.30018	-0.019587	0.35152	0.21813	0.1841	
{'fl_cov_yshr_SS'	}	0.0093601	-0.032478	-0.033818	-0.10373	-0.098514	-0.069596	
{'fl_cor_yshr_SS'	}	0.0058267	-0.020106	-0.206	-0.3053	-0.28477	-0.29175	
{'fl_cov_yshr_tax'	}	0.099405	0.11025	0.018741	0.01336	0.038806	0.024785	
{'fl_cor_yshr_tax'	}	0.41564	0.45846	0.76677	0.26411	0.75345	0.69786	
{'fl_cov_yshr_nttxss'	}	0.090044	0.14273	0.052559	0.11709	0.13732	0.094381	
{'fl_cor_yshr_nttxss'	}	0.05183	0.081703	0.29603	0.31865	0.36703	0.36583	
{'fracByP0_01'	}	0	0	5.4315e-06	0.15286	4.2545e-06	5.2111e-06	
{'fracByP0_1'	}	0	0	8.2399e-05	0.15286	6.3218e-05	7.7572e-05	
{'fracByP1'	}	0	0	0.0013761	0.15286	0.0010863	0.0013135	
{'fracByP5'	}	0	0	0.01022	0.15286	0.007951	0.010012	
{'fracByP10'	}	0	0	0.025187	0.15286	0.018765	0.02408	
{'fracByP20'	}	0.00074359	0.00061895	0.065443	0.15286	0.04804	0.055597	
{'fracByP25'	}	0.0014042	0.0020497	0.090297	0.15286	0.066483	0.075666	
{'fracByP30'	}	0.0041483	0.0051966	0.11827	0.15286	0.08755	0.0995	
{'fracByP40'	}	0.01665	0.018812	0.18387	0.40183	0.13814	0.15151	
{'fracByP50'	}	0.045047	0.046332	0.26291	0.40183	0.20163	0.21876	
{'fracByP60'	}	0.094899	0.095657	0.35672	0.40183	0.27993	0.29717	
{'fracByP70'	}	0.17353	0.17824	0.46729	0.56321	0.37814	0.39623	
{'fracByP75'	}	0.24359	0.23689	0.52992	0.56321	0.43683	0.45498	

```
{'fracByP80'         }         0.32643         0.31096         0.59841         0.75407         0.50391         0.52169
{'fracByP90'         }         0.56332          0.5274         0.75898          0.8953         0.67588         0.69048
{'fracByP95'         }         0.69729         0.69468         0.85836          0.8953         0.79474         0.80629
{'fracByP99'         }         0.90278         0.90216         0.96058               1         0.93117            0.94
{'fracByP99_9'       }         0.98493         0.98362         0.99414               1         0.98801         0.99016
{'fracByP99_99'      }         0.99793         0.99759         0.99921               1         0.99841         0.99857
```

```matlab
% [Phi_true,Phi_adj] = snw_ds_main(mp_params, mp_controls);
Phi_true = Phi_true/sum(Phi_true(:));
```

Show All Info in mp_dsvfi_results

```matlab
mp_cl_mt_xyz_of_s = mp_dsvfi_results('mp_cl_mt_xyz_of_s');
disp(mp_cl_mt_xyz_of_s('tb_outcomes'))
```

	mean	unweighted_sum	sd	coefofvar	gini	min	max	pYis0
a_ss	4.2486	2228	6.7963	1.5996	0.68054	0	135	0.1223
ap_ss	4.3473	5.3198e+08	6.834	1.572	0.68147	0	163.7	0.10225
cons_ss	1.0676	5.0976e+07	0.69454	0.65055	0.3385	0.036717	141.66	0
n_ss	2.3554	21	1.4375	0.61029	0.3128	1	6	0
y_all	1.4672	8.3563e+07	1.4636	0.99755	0.44353	0.038108	50.873	0
y_head_inc	1.1087	1.9253e+06	1.0092	0.91029	0.41889	0.038108	24.357	0
y_head_earn	0.88655	19732	0.92804	1.0468	0.53121	0	18.957	0.2016
y_spouse_inc	0.35849	4.8273e+05	0.95494	2.6638	0.85255	0	26.627	0.52499
yshr_interest	0.12214	3.8429e+06	0.16806	1.3759	0.66002	0	0.99299	0.1223
yshr_wage	0.77513	8.8876e+06	0.33759	0.43553	0.2056	0	1	0.10584
yshr_SS	0.10273	30336	0.23637	2.3009	0.91226	0	1	0.7984
yshr_tax	0.17862	2.8339e+06	0.03519	0.19701	0.11226	0.036506	0.2552	0
yshr_nttxss	0.075896	2.8036e+06	0.25563	3.3681	1.3974	-0.89184	0.2552	0