

Economics 442  
Macroeconomic Policy

Lectures 16-17

3/13-15/2017

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Spring 2017

# Accounting, Exchange Rates

- Balance of payments accounting
- Exchange rates
- Foreign exchange markets

# Balance of Payments Accounting

$$\begin{array}{ccccccc} \text{CA} & + & \text{KA} & + & \text{ORT} & & \equiv 0 \\ \text{"current a/c"} & & \text{"private financial a/c"} & & \text{"official financial a/c"} & & \end{array}$$

$$\text{CA} \equiv \text{NX} + \text{transfers} + \text{net income}$$

$$\text{NX} \equiv \text{EX} - \text{IM}/\varepsilon$$

ORT is changes in holdings of central banks, monetary authorities

# U.S. Current Account

[Millions of dollars; quarterly data seasonally adjusted]

Period	Current Account <sup>1</sup>												Current account balance as a percentage of GDP
	Goods <sup>2</sup>			Services			Balance on goods and services	Primary income receipts and payments			Balance on secondary income <sup>3</sup>	Balance on current account	
	Exports	Imports	Balance on goods	Exports	Imports	Balance on services		Receipts	Payments	Balance on primary income			
2006 .....	1,040,905	1,878,194	-837,289	416,738	341,165	75,573	-761,716	693,089	649,752	43,337	-88,347	-806,726	-5.8
2007 .....	1,165,151	1,986,347	-821,196	488,396	372,575	115,821	-705,375	844,033	743,429	100,604	-113,872	-718,643	-5.0
2008 .....	1,308,795	2,141,287	-832,492	532,817	409,052	123,765	-708,726	823,707	677,561	146,146	-128,209	-690,789	-4.7
2009 .....	1,070,331	1,580,025	-509,694	512,722	386,801	125,920	-383,774	614,379	490,794	123,584	-123,833	-384,023	-2.7
2010 .....	1,290,273	1,938,950	-648,678	563,333	409,313	154,020	-494,658	684,915	507,254	177,661	-124,964	-441,961	-3.0
2011 .....	1,499,240	2,239,886	-740,646	627,781	435,761	192,020	-548,625	759,727	538,766	220,961	-132,690	-460,354	-3.0
2012 .....	1,562,578	2,303,749	-741,171	656,411	452,013	204,398	-536,773	768,956	553,163	215,792	-125,547	-446,527	-2.8
2013 .....	1,592,002	2,294,247	-702,244	701,455	461,087	240,368	-461,876	794,658	575,689	218,970	-123,515	-366,422	-2.2
2014 .....	1,633,320	2,385,489	-752,169	743,257	481,264	261,993	-490,176	821,807	597,802	224,005	-125,888	-392,060	-2.3
2015 .....	1,510,303	2,272,868	-762,565	750,860	488,657	262,203	-500,361	782,915	600,531	182,385	-144,988	-462,965	-2.6
2014: I .....	403,365	589,078	-185,712	183,220	118,022	65,199	-120,514	202,351	145,604	56,746	-30,887	-94,654	-2.2
II .....	409,701	601,537	-191,836	186,211	120,209	66,002	-125,834	204,485	149,862	54,623	-22,849	-94,060	-2.2
III .....	412,087	596,763	-184,677	185,735	120,474	65,262	-119,415	209,622	150,297	59,325	-35,529	-95,619	-2.2
IV .....	408,167	598,111	-189,944	188,091	122,560	65,531	-124,414	205,349	152,039	53,310	-36,623	-107,726	-2.4
2015: I .....	383,936	577,452	-193,517	188,332	121,329	67,003	-126,514	194,716	146,365	48,351	-36,386	-114,549	-2.6
II .....	383,935	574,812	-190,876	188,448	121,599	66,848	-124,028	199,359	154,288	45,071	-32,947	-111,904	-2.5
III .....	377,157	566,925	-189,768	187,118	122,961	64,157	-125,611	196,752	154,903	41,848	-39,343	-123,106	-2.7
IV .....	365,275	553,678	-188,404	186,962	122,767	64,195	-124,209	192,089	144,974	47,115	-36,312	-113,406	-2.5
2016: I .....	354,143	540,433	-186,290	184,727	123,654	61,073	-125,217	188,488	154,473	34,015	-40,637	-131,838	-2.9
II .....	360,228	546,964	-186,736	186,203	124,212	61,991	-124,745	202,619	158,398	44,221	-37,747	-118,271	-2.6
III <sup>P</sup> .....	375,947	553,644	-177,697	188,170	126,905	61,265	-116,433	202,825	159,426	43,400	-39,925	-112,958	-2.4

Source: *Economic Indicators*, January 2017

<https://www.gpo.gov/fdsys/browse/collection.action?collectionCode=ECONI>

# Financial Account

[Millions of dollars; quarterly data seasonally adjusted]

Period	Balance on capital account <sup>1</sup>	Financial account											Statistical discrepancy	U.S. official reserve assets, net (unadjusted, end of period) <sup>4</sup>
		Net U.S. acquisition of financial assets excluding financial derivatives [net increase in assets / financial outflow (+)]					Net U.S. incurrence of liabilities excluding financial derivatives [net increase in liabilities / financial inflow (+)]				Financial derivatives other than reserves, net transactions	Net lending (+) or net borrowing (-) from financial account transactions <sup>5</sup>		
		Total	Direct investment assets	Portfolio investment assets	Other investment assets	Reserve assets <sup>4</sup>	Total	Direct investment liabilities	Portfolio investment liabilities	Other investment liabilities				
2006 .....	-1,788	1,336,866	296,059	493,366	549,814	-2,373	2,116,304	294,289	1,126,735	695,280	-29,710	-809,148	-634	65,895
2007 .....	384	1,572,509	532,939	380,807	658,641	122	2,183,538	340,066	1,156,612	686,860	-6,222	-617,251	101,008	70,565
2008 .....	6,010	-309,468	351,724	-284,269	-381,770	4,848	454,051	332,734	523,683	-402,367	32,947	-730,572	-45,793	77,648
2009 .....	-140	132,204	313,726	375,883	-609,662	52,256	318,350	153,787	357,352	-192,789	-44,816	-230,962	153,201	130,760
2010 .....	-157	963,449	354,575	199,620	407,420	1,835	1,386,345	259,345	820,434	306,566	-14,076	-436,972	5,146	132,433
2011 .....	-1,186	496,320	440,405	85,365	-45,327	15,877	977,073	257,411	311,626	408,036	-35,006	-515,759	-54,219	147,953
2012 .....	6,904	177,747	378,222	248,760	-453,695	4,460	625,352	243,010	747,017	-364,675	7,064	-440,540	-917	150,175
2013 .....	-412	651,427	394,635	481,298	-221,408	-3,099	1,044,635	276,978	511,987	255,670	2,222	-390,987	-24,153	144,575
2014 .....	-45	823,343	343,441	582,688	-99,203	-3,583	1,056,374	207,368	701,861	147,145	-54,347	-287,378	104,727	130,090
2015 .....	-42	225,398	348,646	153,968	-270,924	-6,292	395,234	379,435	250,936	-235,137	-25,392	-195,227	267,780	117,581
2014: I .....	-43	153,627	54,287	102,090	-1,794	-956	289,054	-86,791	248,214	127,631	6,105	-129,322	-34,625	144,284
II .....	-2	229,606	69,849	204,484	-45,500	773	293,401	69,348	99,475	124,578	-4,423	-68,218	25,843	145,176
III .....	-1	330,098	101,811	128,515	100,661	-889	371,787	118,119	230,476	23,192	-24,304	-65,993	29,627	137,054
IV .....	0	110,012	117,494	147,598	-152,569	-2,511	102,132	106,691	123,696	-128,255	-31,725	-23,845	83,881	130,090
2015: I .....	-22	357,562	86,576	233,068	42,077	-4,159	348,004	194,067	102,922	51,015	-40,199	-30,642	83,929	119,270
II .....	-20	104,122	114,779	140,675	-150,455	-877	205,435	108,005	256,154	-158,723	1,708	-99,605	12,318	120,333
III .....	-1	-83,824	51,322	-97,468	-37,412	-266	-39,884	50,590	-126,250	35,775	746	-43,194	79,913	120,218
IV .....	0	-152,461	95,969	-122,306	-125,134	-990	-118,322	26,773	18,109	-163,204	12,353	-21,786	91,620	117,581
2016: I .....	-58	59,862	67,412	-57,326	50,968	-1,191	118,207	91,335	-21,197	48,069	12,994	-45,350	86,546	119,727
II .....	0	323,426	106,273	146,397	70,566	189	367,324	174,007	11,934	181,383	2,904	-40,994	77,278	120,202
III <sup>P</sup> .....	0	31,451	87,513	-35,111	-22,593	1,642	251,459	86,874	229,129	-64,544	12,063	-207,945	-94,987	122,431

<sup>4</sup> Consists of monetary gold, special drawing rights (SDRs), the U.S. reserve position in the International Monetary Fund (IMF), and other reserve assets, including foreign currencies.

<sup>5</sup> Net lending means that U.S. residents are net suppliers of funds to foreign residents, and net borrowing means the opposite.

Sources: Department of Commerce (Bureau of Economic Analysis), Department of the Treasury, and the Board of Governors of the Federal Reserve System.

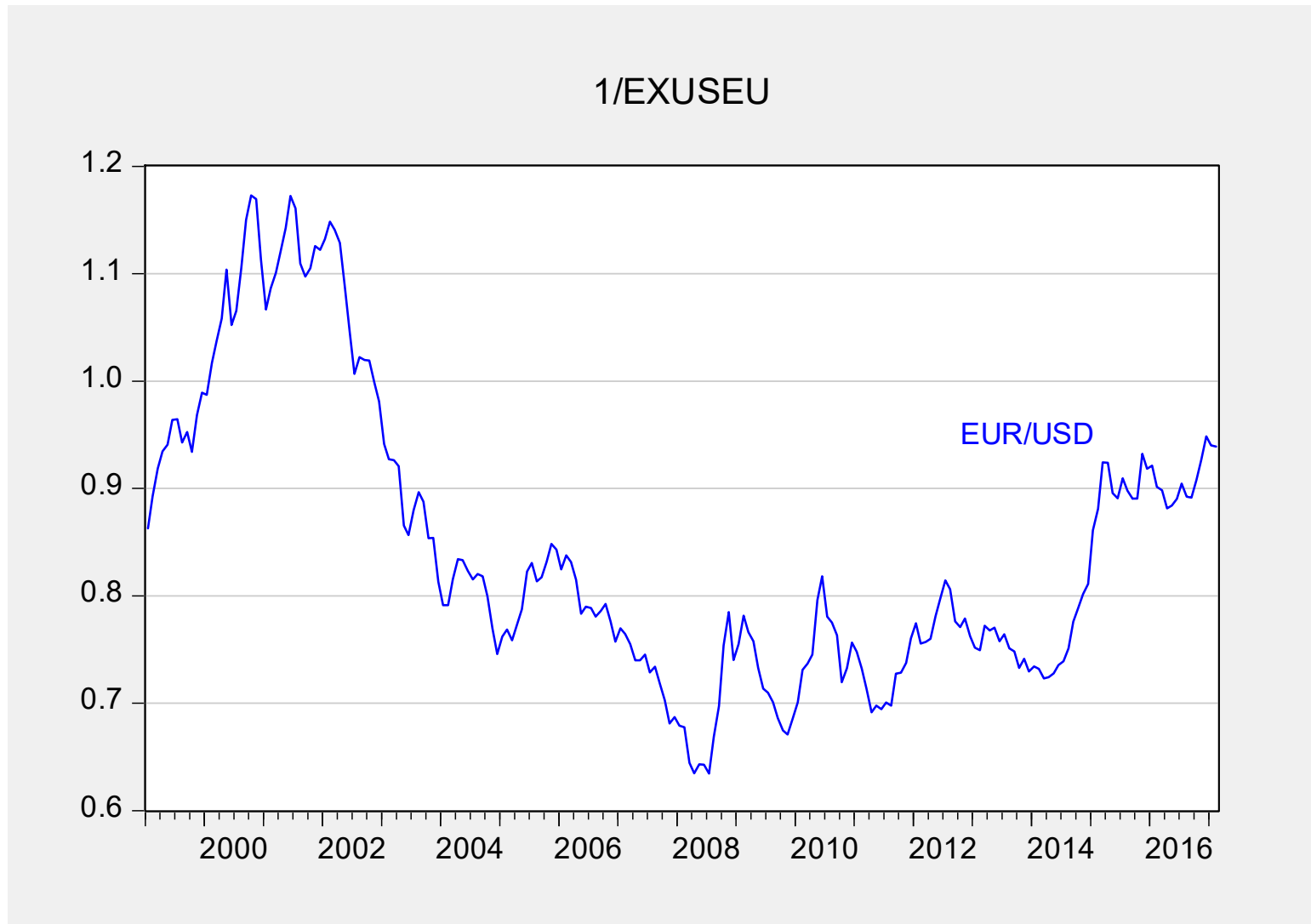
Source: *Economic Indicators*, January 2017

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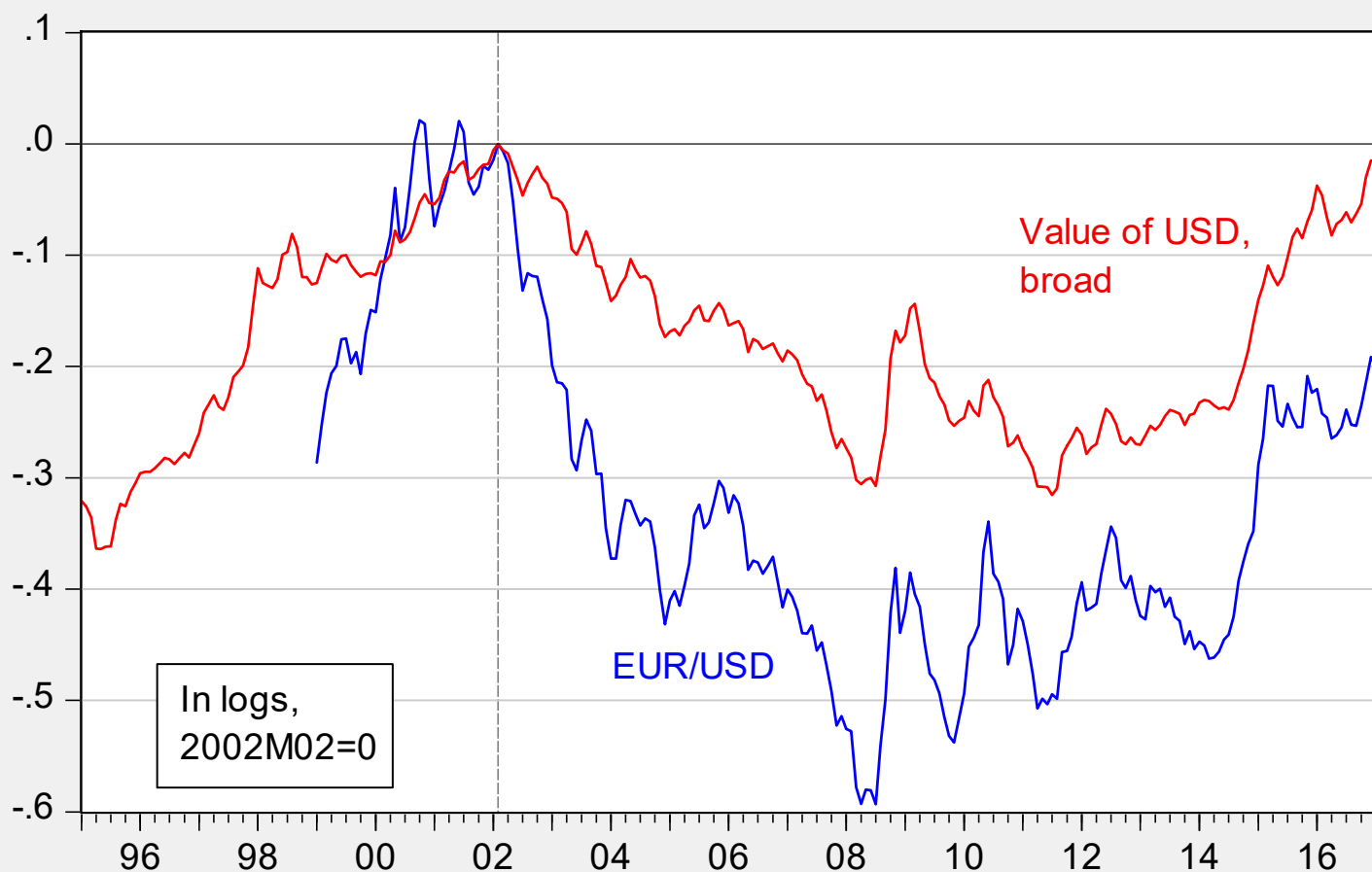
# Definitions

- Exchange rates: number of foreign currency units required to purchase one unit of home currency; also value of home currency.
- E.g., from EU resident perspective:  $\$/\epsilon$ ,  
 $\yen/\epsilon$
- E.g., from Chinese resident perspective:  
 $\$/\yen$

# Example: €/\$



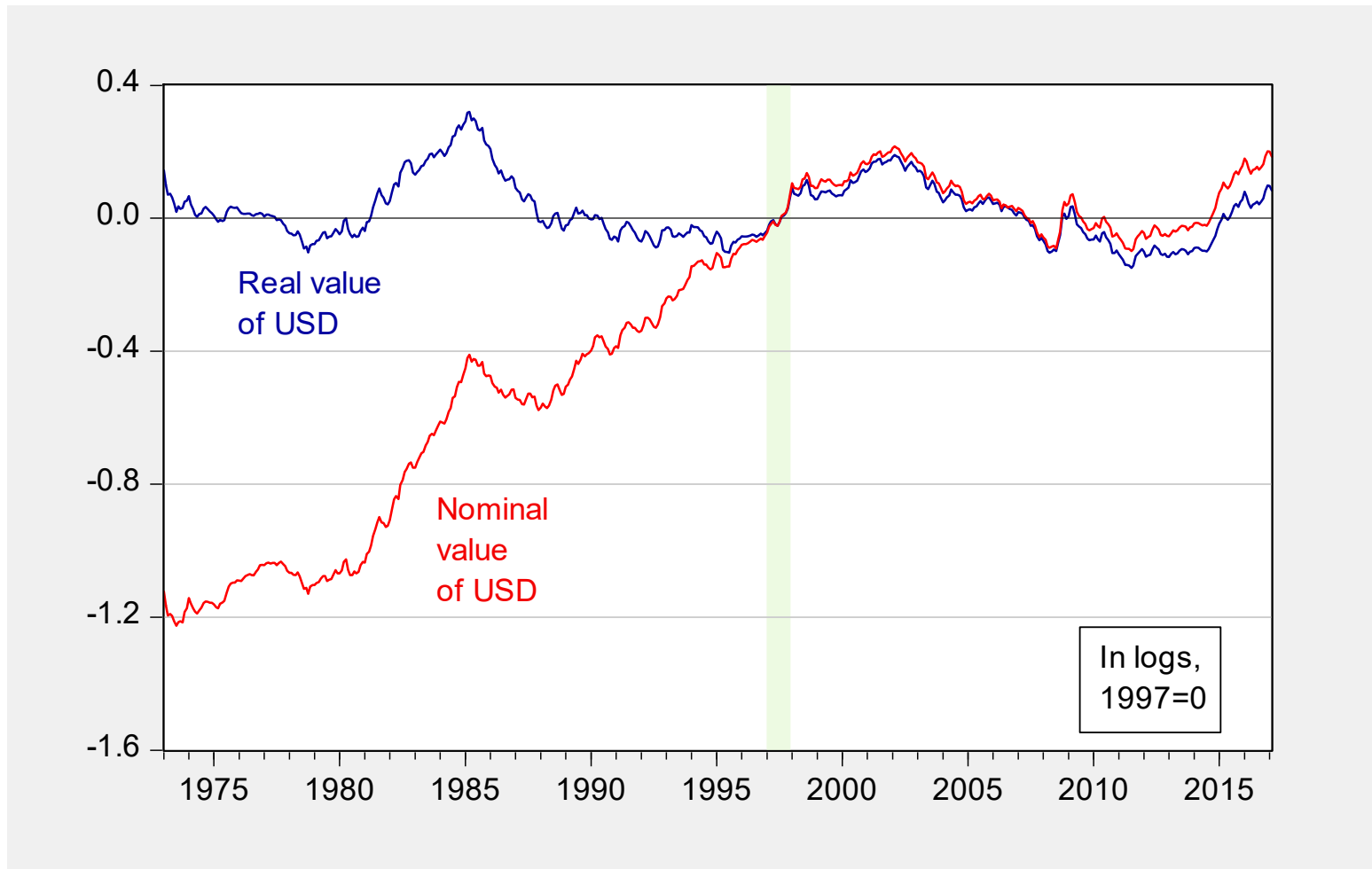
# The Dollar Exchange Rate (vs. Euro, Trade Weighted basket)



Source: Federal Reserve Board via FRED



# The Dollar Exchange Rate (Nominal vs. Real)



Source: Federal Reserve Board via FRED

# Dollar – Interest Rates

