Exam 1: Cheat sheet

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Goal: Max current Value per share // Maximize shareholder wealth | IFisher = $E(e) \approx i_{\$} - i_{F_1}$ | Forward ExpPar. = $E(e) \approx \frac{F-S}{S}$

Differences: - Foreign Exchange risk - Political risk - Expanded opportunity set

Gold Standard: Pros: Autocorrection // control inflation Cons: deflationary // depends on rule-adherence

Fixed Exchange Rates: Triffen Paradox = US. Deficit to maintain growing reserves // Fix: basket currency

Floating Exchange Rates: Pros: Easier adjustments // Autonomy Cons: uncertainty hampers trade

Impossible Trinity: ① Exchange rate stability ② full integration ③ monetary independence

Balance of Payments: ① Current Acc. ② Financial Acc. ③ Capital Acc. ④ Off. Reserves Acc. ⑤ Net error and Omissions Acc.

- Credit (+) inflow of capital - Debit (-) outflow of capital (to foreigners)
  - ↑ (export good or service) ↑ (imports or purchases of services)
- CA + FA + RA = 0 For Floating: CA + FA = 0 (no government control) ★ Can lower inflation
- If inflation rate increases relative to trade partners → exports decrease // imports increase

Foreign Exchange: Bid Price: e in one currency at which a dealer will buy another currency

Ask price: e at which dealer will sell other currency

	Bid	Ask
$S(\$/F)$	X	Y
$S(F/\$)$	$\frac{1}{Y}$	$\frac{1}{X}$

① sell F: X // Buy F: Y ★★

② Buy \$: $\frac{1}{X}$ // sell \$: $\frac{1}{Y}$ ★★

$F \times \frac{\$}{F} = \$$ $\$ \times \frac{F}{\$} = F$

Given F→\$ ★★ if $\frac{F}{\$}$ then ask // if $\frac{\$}{F}$ then bid ★★

Given \$→F ★★ if $\frac{F}{\$}$ then bid // if $\frac{\$}{F}$ then ask ★★

(might have to flip rate)

Triangular Arbitrage $S(\frac{\$}{F_2})$ $S(\frac{\$}{F_1})$ $S(\frac{F_2}{F_1})$ Try: $S(\frac{\$}{F_1}) \times S(\frac{F_2}{F_2}) = S(\frac{\$}{F_2})$

if $S(\frac{\$}{F_2})$ ≠ quoted $S(\frac{\$}{F_2})$ Arbitrage

then: \$→F_1 F_1→F_2 F_2→\$ Profit

(inner cross)

w/ Bid/Ask ⇒ { $S_B(F_2/F_1)$ ⇒ sell F_2/buy \$ @ $S_B(\frac{F_2}{\$})$ → sell \$/buy F_1 @ $S_B(\frac{\$}{F_1})$; $S_A(F_2/F_1)$ ⇒ sell F_1/buy \$ @ $S_A(\frac{\$}{F_1})$ → sell \$/buy F_2 @ $S_A(\frac{F_2}{\$})$ }

Recall: when flipping rates, use opposite rate → Bid/Ask

Forward Prem/Disc. = if $F_n(\frac{\$}{F_1})$ is decreasing ⇒ F_1 depreciate // if $F_n(\frac{F_1}{\$})$ is increasing ⇒ F_1 dep.

Forward Prem/Disc. for F_1 = $f_{NF_1} = \left(\frac{F_N(\$/F_1) - S(\$/F_1)}{S(\$/F_1)}\right) \times 360$

Forward Prem/Disc. for \$ = $f_{N\$} = \left(\frac{F_N(F_1/\$) - S(F_1/\$)}{S(F_1/\$)}\right) \times 360$

International Parity Conditions

Absolute Purchasing Power Parity = $S(\frac{\$}{F_1}) = \frac{P_\$}{P_{F_1}}$ (P = consumption basket // price level)

Relative Purchasing Power Parity = $(S_1 - S_0)/S_0 = e = (\pi_\$ - \pi_{F_1})/(1+\pi_{F_1}) \approx \pi_\$ - \pi_f$

- Relatively high inflation rate depreciates currency value

Real Exchange Rate = $q = (1+\pi_\$)/((1+e)(1+\pi_{F_1}))$

- if q = 1 ⇒ domestic Comp. unaltered // if q < 1 ⇒ domestic comp. improves // if q > 1 dom. Comp. down

Covered Int. Arb. = Borrow \$ → F_1 @ $S(\$/F_1)$ / Invest F_1 @ i_{F_1} / sell F_1 with Forward rate

Interest Rate Parity ⇒ $F = S((1+i_\$)/(1+i_{F_1}))$ // $i_\$ - i_{F_1} \approx \frac{F-S}{S}$

- if $i_\$ > i_{F_1}$ ⇒ F > S ⇒ F_1 is at forward premium and \$ is at forward discount (\$ depreciates)
- if $i_\$ < i_{F_1}$ ⇒ F < S ⇒ F_1 is at forward discount and \$ is at forward premium (F_1 depreciates)

Net arbitrage Cash Flow = $(1+i_{F_1})F - (1+i_\$)S$ when no opportunity this equals zero

Actual Arbitrage Cash Flow = Amount made lending abroad − Amount to pay back to lender @ home

- if $F < S \times ((1+i_\$)/(1+i_{F_1}))$ ⇒ F_1 undervalued ⇒ Borrow F_1/Buy \$@S/lend in \$ and sell \$ forward
- if $F > S \times ((1+i_\$)/(1+i_{F_1}))$ ⇒ F_1 overvalued ⇒ Borrow \$/buy F_1 @S/lend in F_1 and sell F_1 Forward
- if F<S ⇒ i_{F_1}↑ // $i_\$$↓ // \$ appreciate in Spot market (ST) // \$ depreciate in Forward market (FV)
- if F>S ⇒ $i_\$$↑ // i_{F_1}↓ // F_1 appreciate in Spot Market (ST) // F_1 depreciate in Forward market (FV)
- if F<S ⇒ Below IRP graph ⇒ $i_\$ - i_{F_1}$ decrease ⇒ (F-S)/S increase
- if F>S ⇒ Above IRP graph ⇒ $i_\$ - i_{F_1}$ increase ⇒ (F-S)/S decrease