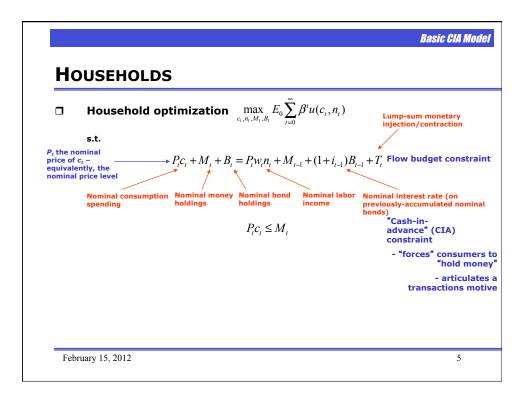
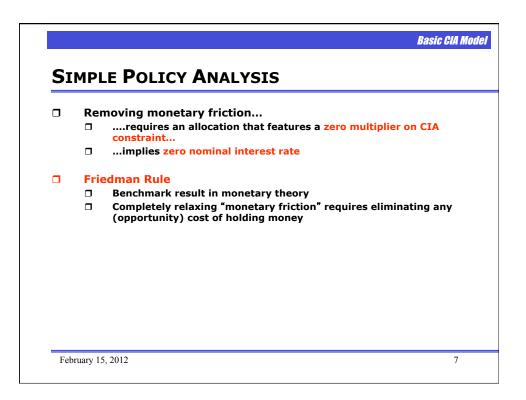


BA	ASIC ISSUES
	Money/monetary policy issues an enduring fascination in macroeconomics
	How can/should central bank "control" the economy? Should it/ can it at all?
	Roles of "money"
	□ Medium of exchange (transactions role) ← Highlighted in CIA, MIU, and money-search approaches
	□ Unit of account (numeraire role)
	Store of value (asset role) approach
	How to "model money" in DSGE environment?
	Which role to model?
	Which role is tractable to model?
	Which role is most relevant for conduct of monetary policy?

Household op s.t.	otimization	$\max_{c_t, n_t, M_t, B_t} E_0 \sum_{t=0}^{\infty}$	$\beta^{t}u(c_{t},n_{t})$	Lump-sum monetary injection/contraction
ominal <i>c_t</i> –, ntly, the price level	$P_t c_t + M_t + B_t$	$P_t = P_t w_t n_t + M_t$	$+(1+i_{t-1})B_{t-1}$	$_{-1} + T_t$ Flow budget construction
Nominal consumption spending	Nominal money holdings	y Nominal bond holdings	Nominal labor income	Nominal interest rate (on previously-accumulated nomination bonds)



rice of c _t - quivalently, the ominal consumption Nominal money Nominal bond holdings Nominal labor income Nominal interest rate (on previously-accumulated nor bonds) $P_t c_t \le M_t$	Но	DUSEHOLDS			
$\begin{array}{c} \begin{array}{c} \begin{array}{c} \begin{array}{c} \begin{array}{c} \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\$		Household optin	mization $\max_{c_t, n_t, M_t, B_t} E_0$	$\sum_{t=0}^{\infty} \beta^t u(c_t, n_t)$	
inice of c_t → $P_tc_t + M_t + B_t = P_tw_tn_t + M_{t-1} + (1+i_{t-1})B_{t-1} + T_t$ Flow budget constraint requivalently, the boominal price level Nominal consumption Nominal money Nominal bond holdings Nominal bond holdings $P_tc_t \le M_t$ CIA constraint a friction on economy Pareto-optimal allocations do not require it Money not <u>"essential"</u> as in models of Kiyotaki and Wright (1993) Lagos and Wright (2005) Does not ENDOGENOUSLY EXPAND consumers' set of features fulls are allocations do not require it trades. Because underlying DSGE model features fulls are allocations do not redevine set of features fulls are allocations do not reduce and wright (1993)					
P _i c _i ≤ M _i "Cash-in-advance" (CIA) constraint □ CIA constraint a friction on economy - "forces" consum "hold n "hold n" □ Pareto-optimal allocations do not require it - articu □ Money not "essential" as in models of Kiyotaki and Wright (1993); Lagos and Wright (12005) Does not ENDOGENOUSLY EXPAND consumers' set of features full state-date pairs) of Arrow-Debre see (including over all state-date pa	quivale	Nominal consumption	ominal money Nominal bon	d Nominal labor	Nominal interest rate (on
 CIA constraint a friction on economy "hold n Pareto-optimal allocations do not require it - articu Money not <u>"essential</u>" as in models of Kiyotaki and Wright (1998); Lagos and Wright (2005) Does not ENDOGENOUSLY EXPAND consumers' set of features full set (including over all state-date pairs) of Arrow-Derve see 		spending no			bonds) "Cash-in- advance" (CIA)
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Money not <u>"essential"</u> as in models of Kiyotaki and Wright (1998); Lagos and Wright (2005) Does not ENDOGENOUSLY EXPAND consumers' set of fee trades. Because underlying DSGE model features full set (including over all state-date pairs) of Arrow-Debreu sec		Pareto-optim	nal allocations do no	t require it	- articula
trades. Because underlying DSGE model features full set (including over all state-date pairs) of Arrow-Debreu sec			right (2005)	-	and Wright (1993) > m
		-	trades. I (includin	Because underlying g over all state-da	DSGE model features full set te pairs) of Arrow-Debreu secur



	Removing monetary friction
	 requires an allocation that features a zero multiplier on CIA constraint
	implies zero nominal interest rate
	Friedman Rule
	Benchmark result in monetary theory
	 Completely relaxing "monetary friction" requires eliminating any (opportunity) cost of holding money
	Other Interpretations
ally the	ng
	Eliminate the wedge in the consumption-leisure optimality condition
	Are monetary frictions empirically important?and thus, is the Friedman Rule of practical use for advising monetary policy?

