

(& 21 0RQHWDU\ (FRQRPLFV ,,
&DSLWDO 0DUNHW , ~~DSHUFDFWVRQFWXUHQ DQG)L~~
'HYHORSPHQW %XVLQHVV &\FOH DQG *URZ

)DOO
0DORQH\ +DOO 7 7+

3URI)DELR 6FKLDQWDUHOOL
5RRP 0DORQH\ +DOO
7HO
(0\$, / VFKLDQWD#EF HGX
2IILFH KRXUV 7 7K DP

6\OODEXV DQG 5HDGLQJ /LVW
\$XJXVW

&RQWHQW ,Q WKLV FRXUVH , ZLOO ~~WDOO~~ ~~CPHU~~ ~~NHWH~~ ~~ILQSVHUU~~
LQYHVWPHQW EXVLQHVV F\FOH IOXLFM ~~XDRXL~~ ~~ZQW~~ ~~KDQ~~ ~~GT~~ ~~XIU~~
H[WHQVLYH UHDGLQJ OLVW VR ~~WRBWH~~ ~~FXH~~ ~~\$VQ~~ ~~H~~ ~~[SOW~~ ~~WHO~~
VXE WRSLFV ZLOO EH FRYHUHG LQ ~~XGZHWDL~~ ~~CE~~ ~~HG~~ ~~XIQ~~ ~~FOR~~ ~~X~~ ~~WVKH~~
LQYHVWLJDWH VRPH RI WKH LVVXH ~~G~~ ~~R~~ ~~Q~~ ~~S~~ ~~X~~ ~~U~~ ~~H~~ ~~R~~ ~~Z~~ ~~L~~ ~~O~~ ~~O~~ ~~Z~~ ~~G~~ ~~W~~ ~~K~~ ~~F~~
ERWK WKHRUHWLFDQ DQG HPSLU ~~QEQD~~ ~~FRQ~~ ~~W~~ ~~U~~ ~~IDE~~ ~~XU~~ ~~R~~ ~~L~~ ~~B~~ ~~Q~~ ~~G~~
HYLGHQFH 7KH FRXUVH ZLOO DOVR ~~RI~~ ~~Q~~ ~~GF~~ ~~OX~~ ~~IG~~ ~~HH~~ ~~DV~~ ~~L~~ ~~R~~ ~~D~~ ~~W~~ ~~L~~ ~~R~~ ~~C~~
DQ HPSLULFDQ H[HUFLVH VHH HQG RI UHDGLQJ OLVW

/HFWXUH QRWHV \$ VHW RI OHFWXUR ~~X~~ ~~Q~~ ~~B~~ ~~WH~~ ~~Q~~ ~~&~~ ~~R~~ ~~Q~~ ~~W~~ ~~K~~ ~~H~~ ~~D~~ ~~P~~ ~~O~~
P\ JRRJOH SHUVRQDO ZHEVLWH
KWWSV VLWHV JRRJOH FRP D EF ~~JUG~~ ~~XG~~ ~~K~~ ~~D~~ ~~E~~ ~~L~~ ~~R~~ VFKLDQWDU

\$VVLJQPHQWV DQG *UDGLQJ 6WXG ~~KQWH~~ ~~ZHO~~ ~~U~~ ~~EH~~ ~~UH~~ ~~\$~~ ~~R~~ ~~U~~
GLVWLQFW WRSLFV XVLQJ YHU\ ~~UK~~ ~~DF~~ ~~H~~ ~~Q~~ ~~W~~ ~~R~~ ~~S~~ ~~D~~ ~~S~~ ~~Y~~ ~~H~~ ~~U~~ ~~D~~ ~~O~~ ~~D~~ ~~M~~ ~~V~~
SUHVHQWDWLRQ)LQDOO\ WKH\ ~~Z~~ ~~E~~ ~~D~~ ~~O~~ ~~L~~ ~~R~~ ~~Q~~ ~~H~~ ~~[[~~ ~~S~~ ~~H~~ ~~U~~ ~~F~~ ~~W~~ ~~M~~ ~~G~~ ~~X~~ ~~M~~ ~~L~~ ~~C~~
GDWD WHFKQLTXHV *UDGLQJ ZLOO EH EDVHG RQ DOO WK

\$ &\$3,7\$/ 0\$5.(7 ,03(5)(&7,216),1\$1&,\$/ 6758&785(
,19(670(17 \$1' %86,1(66 &<&/(')/8&78\$7,216

&RUSRUDWH)LQDQFH 3ULPHU IURP WKH ~~P~~ ~~6~~ ~~H~~ ~~W~~ ~~D~~ ~~U~~ ~~L~~ ~~H~~ ~~F~~ ~~3~~ ~~U~~ ~~H~~ ~~I~~
,QIRUPDWLRQ DQG ,QFRPSOHWH &RQUDFWV

D 7KH 0RGLJOLDQL 0LOOHU 7KHRUHP6 ~~DQ~~ ~~G~~ ~~F~~ ~~W~~ ~~K~~ ~~H~~ ~~U~~ ~~H~~ ~~U~~ ~~H~~ ~~O~~ ~~H~~ ~~Y~~ ~~D~~

0RGLJOLDQL) DQG 0 0LOOHU UD³ ~~W~~ ~~K~~ ~~R~~ ~~Q~~ ~~&~~ ~~R~~ ~~V~~ ~~Q~~ ~~D~~ ~~R~~ ~~F~~ ~~H~~ ~~&~~ ~~D~~ ~~S~~
WKH 7KHRU\ RI QYHVWPHQW \$PHULFDQ (FRQRPLF 5HY

&K LQ 6DUJDFQVWHFRQRPLVH7FRQRGJHGLWLRQ
E)LUPV1)LQDQFLDO 6WUXFWXUH XQRPS\$VWFP&VQWFDQFM
:DOVK 0RQHWDU\ 7KHUR\ DQG 3R70BETHVV &K
-HQVHQ 0 DQG : 0HFNOLQJ 37KDIQU%HRKDWKRU)L
\$JHQF\ &RVWV DQG 2ZQHUVKLS 6WU0RW&EVH' SSRXUQDO
0\HUV 6 & DQG 1 6 0DMOXI 3QRHSWPEVW)L
'HFLVLRQV :KHQ)LUPV +DYH ,QIRUPDWLRQRXUKDDO ,RIYH
)LQDQFLDO (FRQRPLFV -XQH SS
6WLJOLW] - DQG \$:HLVV 3&ZLHWGLWPSBWIHFRWL
,QIRUPDWLRQ' \$PHULFDQ (FRQRPLF 5HYLHZ -XQH SS
%HVWHU + 36FUHHQLQJ 9HUVXV 5DWLRQLQJ LQ

\$Q ,QWURGXFWRQ WR ,QWHUPHGLDWLRQ DQG %DQNLQJ

'LDPRQG ' DQG 3 '\EYLJ 3%DQNDQXQALTXLSRLWLW
-RXUQDO RI 3ROLWLFDO (FRQRPL -XQH SS

'LDPRQG ' 3%DQNV DQG /LTXISRLWWRBQDRLWLWQF
'LDPRQG '\EYLJ 0RGHO' (FRQRPLF 4XDRLWHLFQPR)GHUD
1 6SULQJ SS

-DFNOLQ & - 3'HPDQG 'HSRDLQV L V L V N D G K I D Q U L Q H V V
&RQWUDFWXDO \$UUDQJHPHQWV (RU' , Q W H H U V F R W P S R D Q Q
:DOODFH (GV 0LQQHDSROLV 8QLYSJSJVLW\ RI 0LQQHV

'LDPRQG ')LQDQFLDO ,QWHUFRGLLQWL R Q H Y Q I S Z '
RI (FRQRPLF 6WXGLHV -XO\ SS

'LDPRQG ' 3)LQDQFLDO ,QWHURHWRDWRQ D
(FRQRPLF 4XDUWHUOH %DQHURD 55LHFKHFRXQPHURSS

%R\G - + DQG (& 3UHVFRWW 0L3YLQDQFLDO ,QWHU
-RXUQDO RI (FRQRPLF 7KHUR\ \$SULO SS

'LDPRQG ' : 30RQLWRULQJ DQG W5ZHSXQV D%V D Q R N Q
/RDQV DQG GLUHFWO\ 3ODFHG 'HEW9RORXUQDRI 3R
SS

5DMDQ 5 3,QVLGHUV DQG 2XWHLGWHIURV7KLS 8DQF
\$UPV /HQQWK 'HEW' -RXUQDO RI)LQDQFH SS

3HWHUVHQ 0 DQG 5 5DMDQ WLRQV%KLSWILWVGRHQ
IURP 6PDOO %XVLQHVV 'DWD' -RXUQDO RI)LQDQFH

%HUJHU \$ / .ODSSHU * 8GHOO DQGLW\ *RHH%RQNVV
/HQQ WR ,QIRUPDWLRQDOO\ 2SDTXH LQPDQDQG%XLVLDQHFV
9RO SS

&DSLWDO 0DUNHW ,PSHUIHFWLRQV ,QYHWWXDPWHIQRVQVDQG
0RGHOV DQG \$JJUHJDWH ,PSOLFDWLRQV

D)LQDQFLDO)ULFWLRQV DQG WKH)LQDQFLDRO \$FFPHOHU
°C

0DWVX\DPD . 3\$JJUHJDWH ,PS,PHSHDWHLRQMRQV'&U
1%(5 0DFUR \$QQXDO
KWWS ZZZ QEHU RUJ ERRNVBLQBSURJUHVV PDFUR LC

*HUWOHU 0DUN FRPPHQW RQ .OLFDWWLRQDPDRIS
&UHGLW 0DUNHW ,PSHUIHFWRQV' VHH DERYH IRU OLQ

%UXQQHUPHLHU 0 . 7 0 (LVHQEDFKFUDRQFRQRPDLQFLN
ZLWK)LQDQFLDO)ULFWLRQV D 6XUYH'\ 3ULQFHWRQ 8
KWWS VFKRODU SULQFHWRQ HGXGRDUNXV ILOHV VXUY

%HUQDQNH % DQG 0 *HUWOHU QG 3\$XMQGH&R&WFO
)OXFWXDWLRQV' \$PHULFDQ (FRQRPLF 5HYLHZ 0DUF

%HUQDQNH % DQG 0 *HUWOHU RQ3RPPQFLDO
3HUIRUPDQFH' 4XDUWHUO\ -RXUQDO RI (FRQRPLFV)HE

*HUWOHU 0 DQG 5 * +XEEDUG VLQHVLQDQFLDO
)OXFWXDWLRQFLDQ 0DUNHW 9RODWLQW\ &DXVHV &
5HFRPPHQGDWLRQDO 5HVHUYH %DQN RI .DQVDV &LW\

&DUOVWURP & 7 DQG 7 6)XHUVWUWK DQ\$J%QFLQRY
)OXFWXDWLRQV \$ &RPSXWDEOH *HQHFDQ(FRQRPLFLX
5HYLHZ 'HFHPEHU SS

%HUQDQNH % 0 *HUWOHU DQG 6HWLQFLKFWLVRQV DQ
&\FOLFDO)OXFWXDWLRQ'0DFURRPPIDQ 0 :RRGIR
HGV DYDLODEOH DOVR DV 1%(5 :RUNLQJ 3DSHU D

.L\RDNL 1 DQG - ORRUH 3RQHLQWLDQ(FRQRPLF
1 \$SULO SS

'PLWULHY 0 DQG - +RGGHQEDJK DQG 6³&RQD&RQWU
&RQWUDEFWV' PLPHR)68

5RPHU & ' DQG ' + 5RPHU 31HZ 7UDQGHVPEMVRQVH
0HFKDQLVP' %URRNLQJV 3DSHUV RQ (FRQRPLF \$FWLYL

5DPH\ 9 3+RZ ,PSRUWDQW LV WDKHV&LVHGLRW &RKD
0RQHWDU\ 3ROLF\"' &DUQHJLH 5RFKHLVW3RUO&RQIHUHQ
'HFHPEHU SS

%HUQDQNH % 6 DQG \$ 6 %OLQGHUHQG WK³H &K DQGHUOD
0RQHWDU\ 7UDQVPLVLRQ' \$PHULFDQ (FRQRPLF 5HYLH
%HUQDQNH % 0 *HUWOHU DQG DO \$LFFHCUHVDWRU DQ³
)OLJKW WR 4XDOLW\ 5HYLHZ RI (FRQRPLFVXDQG 6V DV

:DOVK & (DQG - \$:LOFR[3\$DQNY&WH'GLW- DQGH
DQG (5RVHQJUVHQ% DQGM /HQGLQJ ,PSRUWDQW I
0RQHWDU\ 3)RQGHUO 5HVHWYHQ &RQNHRIHQ RN 6HULHV 1F
SS

,DFRYLHOOR 0 DQG 5 0LQHWL QHW³DKH 3RULGLW
(YLGHQFH IURP WKH +RXVLQJ 0DUNHWSS-RXUQDO RI 0D

.DVK\DS \$ 1 - & 6WHLQ DQG ' : :LOFR[DQG &U³H BQW
&RQGLWLRQV (YLGHQFH IURP WKH &R³SRVLWDRQ RI
(FRQRPLF 5HYLHZ QR 0DUFK SS

20LQHU 6 ' DQG * ' 5XGHEXVK &UHGLW &RQVQWBR
(YLGHQFH IURP WKH &RPSRVLWLRQ RI (HWHUHQDO)L
(FRQRPLF 5HYLHZ QR 0DUFK SS

1LOVHQ - + 37UDGH &UHGLW DQGRW³KDQDRIN /
0RQH\ &UHGLW DQG %DQNLQJ)HEUXDU\ SS

0RUJDQ ' 3 37KH &UHGLW (IIEGWQFRI 0RQHWDU
&RPPLWPHQWV' -RXUQDO RI 0RQH\ &UHGLW DQG %DQ

3HHN - DQG (5RVHQJUHQ 37KH ,QWHUQDWLRQ

.DVK\DS \$. 2 \$ /DPRQW DQG - &GL6WHLRQV DQG W&K
&\FOLFDO %HKDYLRUXDIU, QYUHQW-RUXUQDO R1 (F \$ QRPVLW
SS

.DVK\DS \$ 1 - & 6WHLQ ^{3: K B Q/VGRQD%DLONML R/Q}
DERXW WKH 7UDQVPLVLRQ RI 0RQH WDLH BZROLF\'' \$P
SS

(KUPDQQ (/ *DPEDFRUWD - 0DU\$WLRHP3DJHV 3 6H
³)LQDQFLDO V\WHPV DQG WKH 5ROHVRPL%DIQNO/ LQ WK
(XUR \$UHORQHLVQDU\ 3ROLF\ 7UDQVPLVLRQRQHORQWKH (\$UF
.DVK\DS DQG % 0RMRQ HGLWRUV &DPEULGJH 8QLYHUV

.KZDMD \$, DQG \$ 0LDQ ^{37UDFXDGLWKH6KR5D7V}
(YLGHQFH IURP DQ (PHUJLQJ 0DUNHW' \$PHUFDQDQ (F
(FRQRPLF \$VVRFLDWLRQ \$PHULFDQ (FRQRPLF \$VVRF
6HSWHPEHU

-LPHQH] * 2QJHQD 6 3H\GUy - &UDQIGW- 6\$SSOLDD
0RQHWDU\ 3ROLF\ ,GHQWLI\LQJ WKH %DQRNDQ%DODQ
\$SSOLFDWLRQV' \$PHULFDQ (FRQRPLF 5HYWHZQ\$PHULF
SDJHV \$XJXVW

-LPHQH] * 6 2QJHQD - / 3H\GUR DDUGRXV6DXPHQDIR
PRQHWDU\ SROLF\ :KDW GR WZHQRW XWKUWKH PHLODEWQ
PRQHWDU\ SROLF\ RQ FUHGLW ULVN WDNLQJ'' (FRQRPH

F 2WKHU 3DSHUV RQ WKH 7UDQVPLVLRQ 0HFKDQLVP RI

'HOO↑\$ULFFLD * / /DHYHQ DQG *JH6DDGHPRQHWDU%AD
3ROLF\↑V 5LVN 7DNLQJ &KDQQHO (YLGHQFHUNLQRP WK
3DSHUV ,QWHUQDWLRQDO 0RQHWDU\)XQG

'UHFKVOHU , \$ 6DYRY DQG 3 6FDDDEHO RI 0RQHWBU
3ROLF\ RWRSR SDJHV VWHUQ Q\X HGX aVWHUQILQ SVF

,SSROLWR) \$. 2]GDJOL DQG \$LVHRQRI 0RQHWDU
3ROLF\ 7KURXJK %DQN /HQGLQJ 7KH)ORDWLQJ 5DWH &

%ROWRQ 3 DQG ;)UHL[DV ^{3&RQB}WDDWH)L
7UDQVPLVLRQ 0HFKDQLVP' 7KH 5HYLHZ RI)LQDQFLDO

G)LQDQFLDO 6KRFNV)LQDQFLDQRPWHUPHGLDWLRQ

i) *Models without Financial Intermediaries*

-HUPDQQ 8 DQG 9 4XDGULQL)LQDQFLDQRPWHUPHGLDWLRQ
6KRFNV' \$PHULFDQ (FRQRPLF 5HYLHZRUNLQJ) BIESHIDU\

.KDQ \$ DQG - . 7KRPDV ³ & UHGXFWXIDRVLNRQ DQG
(FRQRP\ ZLWK 3URGXFWRQ +HWHURQRPHLWQLY+RUKULQD

*HUWOHU 0 DQG 1 .L\RWDNL DQG) & Q B G E W D B R, Q L V F
%XVLQHVV & \F O B Q S G E R R N L V I' 0 R Q H W D U J 0 () F U L H R P L D F Q / G D Q C
0 :RRGIRU HG V YRO FK (OVHYLHU

&XUGLD 9 DQG 0 :RRGIRUG 3) & R Q D Y O I O W R Q R I O M D O U \ D
3ROLF\ ')5% RI 6W /RXLV 5HYLHZ -XO\ \$XJXVW

:RRGIRUG 0 DQG 9 &XUGLD 37 K H H & H Q W U D D O %
, Q V W U X P H Q W R I 0 R Q H W D U \ 3 R O L F \ ') 5 % X O \ 1 H Z < R U N 6

*HUDOL \$ 6 1HUL / 6HVVD DQ G Q G 6% D Q R U E W W Q D ' 6 '
0 R G H O R I W K H (X U R \$ U H D ' - R X U Q D O R I 6 S Q H \ & U H G L W

\$GULDQ 7 DQG + 6 6KLQ 3) L O B Q F I W D D O U \, Q W H
(FRQRPL E B Q G E R R N R I 0 R Q H W D U J 0 () F U L H R P L D F Q / D Q G 0 : R R G
H G V (O V H Y L H U

\$GULDQ 7 DQG + 6 6KLQ 3) D Q H D O F L G O D Q X H U P V
5LVN')HGHUDO 5HVHUYH %DQN RI 1HZ <RUN 6WDII 5HS

%UXQQHUPHLHU 0 . DQG < 6DQQLNR G H O Z L W # \$ D D F U
)LQDQFLDO 6HFWRU' 3ULQFHWRQ 8QLYHUVLW\ PLPHR
KWWS VFKRODU SULQFHWRQ HGX PDUNXV ILOHV PDFU

\$RNL . DQG . 1LNRORV %DQN 3% D E S E) L Q L D Q F L D P D P G H R
KWWS ZZZ HFE LQW HYHQWV FRQIHUHQFHV KWPO PDU

&KULVWHQVHQ , & 0HK DQG . 0RUBQ DQG 3/HV
0DFURHFRQRPLF '\QDPLF' PLPHR
KWWS ZZZ IHGHUDOUHVHUYH JRY D P Y K O W V F R Q I H U H Q F
& \ F O H V D Q G 0 D F U R H I
KWWS ZZZ HFE LQW

&KDUL 9 9 3 - .HKRH DQG (5 0F*U D W W M D Q D W L Y H
5HSUHVHQWDWLRQV 0HWKRGRORJL&V F O B I Q D F F R F X R P S I R Q L
)HGHUDO 5HVHUYH %DQN RI 0LQQHDSRHSRUVW5HVHDFUFI
0DUFK

+DOO 5 (37KH +LJK 6HQVLW W Y R L W L Q F I Q F E R Q R
)ULFWLRQV' 6WDQIRUG 8QLYHUVLW\ PLPHR

H 2SHQ HFRQRP\

*HUWOHU 0 6 *LOFKULVW) 1D W D L O X V F L R Q 0 R Q H (V W
3ROLF\ DQG WKH)LQDQFLDO \$FFHODUHQW%DUQNLQXUQDO
SS

&HVSHGHV / 3 5 &KDQJ DQG \$ 9H D Q Q F R F K D Q J H % J D O V
3ROLF\ \$PHULFDQ (FRQRPLF 5HYLHZ SS

(OHNGDJ 6 -XVWLQLDQR \$ DQG W F K G N O P D R O Y O 2 S H Q
(FRQRP\ ORGHO RI WKH)LQDQFLDO \$ F O H O D H Y H D W R U L ' O Q D
-RXUQDOV

\$JKLRQ 3 %DFFKHWWD 3 DQG \$ 9 L W % D Q B Q H H R Q H W D
3ROLF\ LQ DQ (FRQRP\ ZLWK &UHGLW \$ R Q M W Z D L Q S / S '

,DFRYLHOOR 0 DQG 5 0LQHWL FOHV³,ZLWKU Q R P W L V R A Q
DQG)RUHLJQ /HQQHUV' -RXUQDO RI 0RQHWDU\ (FRQRP

0HQGRJD (* 6XGGHQ 6WRSWD)JLQ D Q P H L D L F D Q L V H
(FRQRPLF 5HYLHZ ±

3HUUL) 9 4XDGULQL ³,QWHUQDWLRQDO 5HFHVY
KWWS ZZZ ISHUUL QHW 3\$3(56 LUHFHVLRQVBODWHVW

&UHGLW)ULFWLRQV DQG ,QYHVWPHQW 0LFUR (YLGHQF

D (DUO\ &ULWLFDO 5HYLHZV

6FKLDQWDUHOOL) ³)LQDQFLDO 0 H & K R G R O R J Q W
,VXHV DQG ,QWHUQDWLRQDO (YLGHQF\2[PRUG 5HYL
1R SS , V O % D Q Q / H Q G L Q J , P S R U W D Q W I R
0RQHWDU\ 3H R G L W H G E \ - 3H H N D Q G (6 5 R V H Q J U H Q)
%RVWRQ &RQIHUHQFH 6HULHV 1R -XQH

.DSODQ 6 1 DQG / =LQJDOHV VL³WQYHWWPHQSWH&D
9DOLG 0HDVXUHV RI)LQDQFLQJ &RQ~~RR~~W~~DL~~QW~~W~~'D\4XSDU

\$OPHLGD + DQG 0 &DPSHOOR W³)LQDQFLQJ &RQ~~RR~~W~~DL~~QW~~W~~'D\4XSDU
&RUSRUDWH ,QYHVWPHQW' L³WQYHWWPHQSWH&D

%RQG 6 DQG - * &XPPLQV ³1RLWRGKIDURI3ULF
,QYHVWPHQW' ,)6 :RUNLQJ 3DSHUXGLHV ,QVWLWXWH I

&XPPLQV - * . \$ +DVVHWW DQG 6Q'W 2%~~H~~Q~~DL~~VLRU
2EVHUYDEOH ([SHFWDWLRQV DQG ,QVWLWXWH)XQSSV' :

OR\HQ 1 ³,QYHVWPHQW &DVK Q~~DL~~RGZ Y6H~~U~~Q~~W~~L~~W~~L~~Y~~
8QFRQVWUDLQH~~G~~)LUPV' -RXUQDO RI)LQDQFH SS

\$OPHLGD + DQG 0 &DPSLHOOR DQG OD~~V~~K :H~~U~~Q~~ED~~F
6HQVLWL~~Y~~L~~W~~\ RI &DVK' 7KH -RXUQDO RI)LQDQFH /,;

(ULFNVRQ 7 DQG 7 0 :KLWHG H³05H~~U~~Q~~W~~L~~W~~L~~Y~~
EHWZHHQ ,QYHVWPHQW DQG 4' -RXUQDO RI 3ROLWLFDO

*RPHV -) ³)LQDQFLQJ ,QYHVWPHQW~~W~~HZ \$PHUL
'HFHPEHU SS

&RRSHU 5 DQG - (MDUTXH YH³)LQDQFLQJ &RQ~~RR~~W~~DL~~QW~~W~~'D\4XSDU
LQ 4' 5HYLHZ RI (FRQRPLF '\QDPLFV SS

\$GGD - DQG 5 &RRSHU ³'\QDPLFSSORF~~U~~DL~~W~~L~~W~~L~~Y~~
0,7 3UHV 2FWREHU FK

:KLWHG 7 0 ³([WHUQDO)LQDQFLQJ &RQ~~RR~~W~~DL~~QW~~W~~'D\4XSDU
RI ,QYHVWPHQW' -RXUQDO RI)LQDQFLDO (FRQRPLFV

:KLWHG 7 0 DQG * - :X ³)LQDQFLQJ &RQ~~RR~~W~~DL~~QW~~W~~'D\4XSDU
6WXGLHV

& +HQQHV\ \$ /HYL DQG 7 0 :KLWHG ³7HVWLQJ

1LNRORY % / 6FKPLGW 5 6WHUL QVWUDLQWVPLKLE
)ULFWLRQV 0DWWHU IRU &RUSRUDWH 3ROLFLHV" PLPH
KWWSV LGHDV UHSF RUJ S UHG VHG KWPO

H &UHGLW)ULFWLRQV DQG 3ULFH 6HWWLQJ

%LOV 0DUN 3ULFLQJ LQ D &XVWRPHU QDODRNHW
(FRQRPLFV 0,7 3UHVY YRO SDJHV 1RYHPE

*RWWIULHV 1LOV &XVWRPHU 6DULRQWVDQJHGDV
3ULFH 5LJLGLW\ (FRQRPLFD /RQGRQL 6DORFQHQF(HRQ
SDJHV \$XJXVW

&KHYDOLHU -XGLWK \$ 6FKDUIVWHHW, PSMUGHFWLRQV&
&RXQWHUF\FOLFDO 0DUNXSV 7KHUR\ DFQSHYLIHGHZHQFH
\$PHULFDQ (FRQRPLF \$VVRFLDWLRQ EYRU SDJHV

\$QQD %RWWDVVR 0DUJLR *DOHRWWL7K \$OHVS/DQVURI 6
)LQDQFLQJ &RQVWUDLQWV 2Q 0DUNXSV 7KHUR\H\$QHG (Y
'DWD &(5,6 :RUNLQJ 3DSHU , QWFKL RQ WIHU PRUD (E B
*URZWK 0RQFDOLHUL 72

%XFKW &KDUORWWH *RWWIULHV 1LQW /XULFLHQ)DDQ
LQ D 5HFHVLRQ")LQDQFLDO &RQVWUDLQWVLRQYHV
:RUNLQJ 3DSHU 6HULHV 8SSVDFRQRPILYUVLW\ 'H

0DUYLQ - %DUWK ,,, 9DOHULH \$ 5DRH\ORQHWDUKH &
7UDQVPLVLRQ 1%(5 &KDSWHUV LQ 1%(5RDXPHRHFRC
SDJHV 1DWLRQDO %XUHDX RI (FRQRPLF 5HVHD

5DYHQQD)HGHULFR :DOVK &DUO (F\ ZLWK2SWKHP B B V
FKDQQHO -RXUQDO RI 0RQHWDU\ (5RQRPLFV (OVHY
0DUFK

-DH 6LP 5DSKDHO 6FKRHQOH (JRQ =DNUQMOVHMLRQLP
'\QDPLFV 'XULQJ WKH)LQDQFLDO &ULVLRFLHW\ 0RQHWDU
(FRQRPLF '\QDPLFV

I 1HZ 0LFUR DQG 0DFUR (YLGHQFH RQ WKZIL & HQGLW D
LQWHUSUHWHG PRVWO\ EXW QRWU RQJQA 'HUEVP & WKML)
3HULRG

i) US

%HFNHU % DQG 9 ,YDVKLQD \ 3 & LFUPL FCHYLHO R
HYLGHQFH' -RXUQDO RI 0RQHWDUDJ (FRQRPLFV (OVHYL

.DKOH . DQG 5 6WXO] 3\$F DQGV WKR HDQDWBDDQ
,PSDLUHG FUHGLW FKDQQHO RU GLRLQIV3CHGHPDQG
'LFH & HQWHU IRU 5HVHDFK LQ)LQDRQF% 0LQFRVMPZLKH
2KLR 6WDWH 8QLYHUVLW\)HEUXDU\

\$GULDQ 7 &ROOD 3 DQG + 6 6KLFQVLRQV" 3KDLFVL QJQ
(YLGHQFH IURP WKH)LQDQFLDO & ULVLHUVR 1%
1DWLRQDO %XUHDX RI (FRQRPLF 5HVHDFK ,QF

*LOFKULVW 6 9 <DQNRZ (=DNKURMMNDQG (FRQRPHG
)OXFXDWLRQV (YLGHQFH IURP & RUSRU 5DWH 3% RQGV

.DVK\DS \$ DQG / =LQJDOHV 77K/H VVRQV) LQBQF
& RUSRU DWH)LQDQFH' -RXUQDO RI 6)LSWDHPEHU (\$QRP

,YDVKLQD 9 DQG ' 6FKDUIVWHLWKH ILQD%DFQNOOFHQG
' -RXUQDO RI)LQDQFLDO (FRQRPHV (OVHYLHU
6HSWHPEHU

'XFKLQ 5 2 2JEDV DQG % \$ 02pÀ')OXFWXE-ÁÉpG \$À p€

ROX,,°P)LQDT `À@ð0 (FRQRP

ii) *Europe*

\$OEHUDJ]L 8 DQG ' - ODUFKHWW WR 4X³&D]HGLWQ

6FKLYDUGL) (6HWWH * 7DEB00RQL'XULQJ W&UHGGLV

)RUEHV . 3+RZ 'R /DUJH 'HSUHRFUPDQVFRHQV , \$)IH FV
6WDII 3DSHUV SS

'HVDL 0))ROH\ DQG .)RUEHV V DQG) LQBQWIKDO
0XOWLQDWLRQDO DQG /RFDO)LUPV 5HZ/ SRIQ)VLQ DQFF L&XQ
6WXGLHV SS

.DOHOPL 2JFDQ 6 .DPLO + & 9LOOHUJQG HVDQFKH
, QYHVWPHQW LQ WKH \$IWHUPDWK ROL)VLQ DQFF L&XQ &RULV
\$FFHVV WR)LQDQFH' PLPHR 1%(5

0DQRYD . 6 - :HL = =KDQJ D)VLURPQ D)S R\$FWWL YDLQ
XQGHU &UHGLW &RQVWUDLQWV' 1%(5 :RUNLQJ 3DSHU

0LQHWL 5 DQG 6 & =KX 3&UH(SRW W&RQVWU
0LFURHFRQRPLF (YLGHQFH IURP , WDR'PL-RXUQDO SS , Q

\$PLWL 0 DQG ' (:HLQVWHLQ FN(SRUW%(5DQG)
:RUNLQJ 3DSHU

%), 1\$1&, \$/ '(9(/230(17), 1\$1&, \$/ 6758&785(\$1' (&2120, &
*52:7+

0RGHOV DQG 2YHUYLHZ

/HYLQH 5 3)LQDQFLDO 'HYHORSPLHQW DQG (FR
\$JHQGD' -RXUQDO RI (FRQRPLF /LWHUDWXUH -XQH

/HYLQH 5 3)LQDQFH DQG *URZWKIU\$IR&WLVQDFDLOF 6
+DQGERRN RI (FRQRPL\$FKURQV DQG 6 'XUODXI HGV (O
KWWS ZZZ HFRQ EURZQ HGX IDF 5RQYB RHUWLQB%3XFENBL F
'XUODXIB)LQ1*URZWK SGI

7UHZ \$: 3)LQDQFH DQG *URZWKIU\$IR&WLVQDFDLOF 6
0DFURHFRQRPLF \$QDO\VLV &'0\$ IRUGWKFRPLQJ LQ (O
KWWS ZZZ VW DQGUHZV DF XN HFRQRPLFV &'0\$ SDSHU

%HQFLYHQJD 9 DQG % ' 6PLWK DQG) (QBQFHQGX, Q
*URZWK' 7KH 5HYLHZ RI (FRQRPLF 6WXGLHV \$SULO SS

%HUKHOHP\ - & \$DQG 9DURFKBQRNVRQ*URZWKIQF& &OXEV
DQG WKH 5ROH RI)LQDQFLDO 'HYHORSPLHQW' 2[IRUG

*UHHQZRRG - DQG % -RYDQRYLF 3)LQDQFWLH 'HYH
'LVWULEXWLRQ RI ,QFRPH' -RXUQDO R\$S3ROLWLFDO (FR

/HYLQH 5 36WRFN 0DUNHWV QDROZVRK)DQG Q7FH
6HSWHPEHU SS

.LQJ 5 DQG 5 /HYLQH D 3)LQ*URZWK(Q7KHRSUHQHG
(YLGHQFH' -RXUQDO RI 0RQHWDU\ (FRQRPLFV 'HFHPEH

6DLQW 3DXO * 37HFKQRORJLFDQG&KRBRP)EQD
'HYHORS~~PH~~QW' (XURSHDQ (FRQRPLF 5HYLHZ SS

\$JKLRQ 3 DQG 3(QRZUMQRXV *URZWK 3KHVRW\FK

\$JKLRQ 3 0 'HZDWULSRQW DQG 3DQFLDO 'LVF&LSPSLH
DQG *URZWK' 5HYLHZ RI (FRQRPLF 6WXGLHV

\$FHPRJORX ' DQG) =LOLERWWL E\ &K:DDQF3HUR5PLWVKH
'LYHUVLILFDWLRQ DQG *URZWK' -R\$UQDO RI 3ROLWLFDO

'H OD)XHQWH \$ DQG - 0 0DULQ WRUEQQQDQWL
(QGRJHQRXV)LQDQFLDO 'HYHORS~~PH~~QW' -R\$UQDO RI 0

0RUDOHV 0) 3)LQDQFLDO ,QWRZWKGLDWRXJK L
&UHDWLYH 'LVWUXFWLRQ' 0DFURHFRQRPLF '\QDPLFV

\$JKLRQ 3 * 0 \$QJKHOHWRV \$ %DQDWHHLW\ DQGF
*URZWK &UHGLW &RQVWUDLQWV DQGXWKDIO&RPSRQHWWIDF
(FRQRPLFV SS

*UHHQZRRG - - 6DQFKHJ DQG & RDSQJHQW W3)H Q5DQDF
RI ,QIRUPDWLRQ &RVWV 1%(5 :RUNLQJH3DSDQ
(FRQRPLF 5HYLHZ

0LFKDORSRXORV 6 / /DHYHQ DQG, Q5R/YDWRQRIQ DQG
(QGRJHQRXV *URZWK' PLPHR %URZQ 8QLYHUVLW\

%LDQFKL) + .XQJ DQG * 0RUDOHVQ 5HFYWRZWK'V
1%(5 : 3

(DVWHUO\ : ,VODP 5 DQG 6WJLQJLW]G - ([SODLQ6LQDN
*URZWK 9RODWLQW\ \$QQXDO %DQNP&RQIHRUHQGFH RQ '
%DQN :DVKLQJWRQ ' &

%HFN 7 %X\XNNR(WDE)FDNQ% 9D50HKYR 1HWV WKH FUHG
DQG GRHV LW PDWWHU" KRXVHKROG3R0LFL5PHVHDDUGFLQJ
:RUNLQJ 3DSHU 6HULHV 7KH :RUOG %DQN

'HPHWULDGHV 3 2 DQG /DZXWFRQV DQG)HQRQRPLFC
'HYHORS~~PHQW~~' ,QWHUQDWLRQDO -RXUQDO RI)LQDQFH

E ,QG~~XVWU~~\ DQG)LUP /HYHO (YLGHQFH

5DMDQ 5 * DQG =LQJDOHV / G *)LRZWK' LDO '
\$PHULFDQ (FRQRPLF 5HYLHZ -XQH

'HPLUJXF .XQW DQG 9 0DNVLP~~RYLF~~ *URZWK')LQDQ

&HWRUHOOL 1 DQG 0 *DPEHUD)L³%DQNLQJ 0
'HSHQGHQFH DQG *URZWK ,QWHUQDDWLRQDORX(UQGHQFH
)LQDQFH YRO SS

/HYLQH 5 ³%DQN %DVHG RUHOPUN:HKWF%DLVHG)
%HWWHU' -RXUQDO RI)LQDQFLDO ,QWHUPHGLDWLRQ

'HPLUJXF .XQW DQG 5 /HYLQH ³%DQND%DLVHG R
6\VWHPV &URVV FRXQWU)LQDQFLDO VROUXFWLXUH DQG
*URZWK \$ &URVV &RXQWU\ &RPSDULVRQRIP%QNV 0D
(GV \$VOL 'HPLUJXF .XQW DQG 5RVV /HYLQH &DPEULGJ

%HFN 7 DQG 5 /HYLQH ³6WRFN 0DUNH(WLVGH%QNV
-RXUQDO RI %DQNLQJ DQG)LQDQFH

%HFN 7 DQG 5 /HYLQH ³1HZ)LUP)RUPDWLRQ D

I)LQDQFLDO 'HYHORSPHQW DQG &RQYHUJHQFH

\$JKLRQ 3 3 +RZLWW DQG ' 0D\HURR)00BQFLDO
'HYHORSPHQW RQ &RQYHUJHQFH 7KHRUQDQGRI(YLGH
(FRQRPLFV SS

\$JKLRQ 3 3,0FWWUDDWLRQ ZHQWURQWKLSDQHW
)LQDQFH' &DSLWDOLVP DQG 6RFLHW\

J)LQDQFLDO /LEHUDOLJDWLRQ)LQDQFLDO05HMRMORISPH
\$OORFDWLRQ

:XUJOHU - 3)LQDQFLDO 0DUNSLWDDQG-RXKHQDQ
)LQDQFLDO (FRQRPLFV SS

*DOLQGR \$) 6FKLDQWDUHOOL DQDQ\$/LEHUDOLJDWL
,PSURYH WKH DOORFDWLRQ RI ,QYHRSLFQWRXQWURHW
DUNHWEP° rQ`0P€p G-)

%HNDHUW * & 5 +DUYH\ DQG & /XQGEEDDGDOLJDWL'R
6SXU *URZWK"´ -RXUQDO RI)LQDQFLDO (FRQRPLFV YR

%HNDHUW * & 5 +DUYH\ DQG & /XQGEEDDGD)LQDQFLD
/LEHUDOLJDWL'RQ´ -RXUQDO RI ,QWHUQDWLRQDO ORQH

+HQU\ 3 % ³'R 6WRFN 0DUNHWWPBBWDORJDPWL'RQ
-RXUQDO RI)LQDQFLDO (FRQRPLFV 2FWREHU 9RO

+HQU\ 3 ³&DSLWDO DFFRXQW HQLEHUDDQGDWL
6SHFXODWL'RQ´ -RXUQDO RI (FRQRPLF /LWHUDWXUH

/HYFKHQNR \$\$ 5 5DQFLHUH 0 7KRNHQWJWKH ,QGRV
/HYHO 7KH 5HDO HIIHFV RI)LQDQFLDOLHOLHSHUHQWJD
(FRQRPLFV SS

'HOO \$ULFFLD * ' ,JDQ DQG / /DQDQ /HQGLQJ&UH
6WDQGDUGV (YLGHQFH IURP WKH 6XPHSRULPH 0RUWJDJH

5DQFLHUH 5 7RUQHOO \$ DQG) :HWWKHURIDQWV RI
)LQDQFLDO /LEHUDOLJDWL'RQ *URZWK DQDQ &LQDQFH -

3RSRY \$ ³&UHGLW FRQVWUDLQWV ³(QeÑ] @ 5H 5

\$QJNLQDQG \$ 3 : 6DZDQJQJRHQ\DQJ)LODQFLDO:LKQ
/LEHUDOLJDWLRQ DQG %DQNLQJ &UQWLVUQ\$WUHQDQ&BHQ
RI)LQDQFH SS

%DUWK - * &DSULR -U 5 /HYLQH6XSHUY1%DRQ 5:HKDW
:RUNV %HVW" -RXUQDO RI)LQDQFLDO ,QWHUPHGLDWL

%HQIUDWHOOR /) 6FKLDQWDUHO DQG\$, QGHPYEDHVLHROO
(YLGHQFH RQ ,WDOLDQ)LUPV' -RXUQD RYRIP EHQD QFS D C

%ODFN 6 DQG 3 6WUDKDKQ ³(GLWU \$ \$ D H Q D H X I U / K W
-RXUQDO RI)LQDQFH

.HUU : DQG 5 1DQGD ³HPRFUDHWX D L Q W L R Q W U \
)LQDQFLQJ &RQVWUDLQWV DQG (QWLWDS UFRQ R X P L V K L S
IRUWKFRPLQJ

%HFN 7 /HYLð0

& (&2120(75,& 722/6)25 '<1\$0,& 3\$1(/6

\$UHOODQR 0 DQG 6 5 %RQG 3RUP B D Q H M O W G D R W D
0RQWHFUDUOR (YLGHQFH DQG DSSOLF D W L R Q Z W R I (P S C
(FRQRPLF 6WXGLHV

\$UHOODQR 0 DQG 2 %RYHU 3\$ Q P W D K U I U D F E R O
(VWLPDWLRQ RI (UURU & R P S R Q H Q W , O R G H O V ' - R X U Q D O

\$UHOODQR 0 DQG % +RQRUH 33 D Q W O ' D W D
'HYHORSPHQWV' LQ -- +HFNP D Q Q D C E R R N R / H D P R H O R P H G W U
YRO 1RUWK +ROODQG

%RQG 6 5 3'\QDPLF 3DQHO GDWD W O R P H O W K R S G V X I
DQG 3UDFWLFH' &(00\$3 :RUNLQJ SDSHU &:
KWWS FHPPDS LIV RUJ XN GRFV FZS SGI

%OXQGHOO 5 : DQG 6 5 %RQG H Q , Q L S M L D W O I & F R Q L G R L O
'\QDPLF 3DQHO 'DWD ORGHOV,' -RXUQDO RI (FRQRPHWU