

5HSRUW \*HQHUDWHG RQ 1RYHPEHU

3DJH RI

)DPLO\ %XVLQHVHV 'HYHORSLQJ WKH &RSJH ([SDQ(OLZDUUWKH %  
(OJDU GLJLWDONQRZOHGJH EDEVRQ HGX VXPVHS

'H:LWW 5 / ,Q &DU\ &RRSHU \$ODQNUWD 3DQREG -DPHV &D  
'RZQVL]LSQJ &DPEULGJH 'RZQVL]LQJ ,V /HV 6WLOO 0RU  
8QLYHUVLW\ 3UHV

'H:LWW 5 / +DUULJDQ . 5 ,Q \$0\$&20 1LUPDO 3DO DQG -X  
/HYHUDJLQJ 2OG (FRQRP\ )XQGDPHQ\$SDOV IRU 3WKWLQHZWRHODJL  
)URQWLHU

'H:LWW 5 / +DUULJDQ . 5 1HZPDQ : + 'RZQQ\LDPLYQJG / .HW  
VWUDWHYIRFOOSS -\$ , 3UHV \$GYDQFHV LQ DSSOLHG EX  
7KRPDV - % 'H:LWW 5 / 6WQUDWKJWPDDQLJQPHQW UHVHDUF  
SUDFWLFH \$ UHYLHSZSDQG DJHQWDWHLF \$OLJQPHQW LQ 3UDFW  
8QLYHUVLW\ 3UHV

5HIHUUHG -RXUQDO \$UWLFOHV

&KLDQJ . 'H:LWW 5 / )RONPDQ ' -LDR / 5(,7 2ZQHUVK  
DQG &RUSRUDRWUQDQXRI 5HDO (VWDWH 5HVHDUFK

9VHD 310T1UPVWPP % 'H:LWW 5 / 7WKH 'HYHORQPHQW R



%DUEHUD ) \$XWKRU 3UHVHQWHU 6WDPP , \$XWKRU 'H:LWW  
1XUWXULQJ 7UDQVJHQHUDWLRQDO (QWUHSUHQHXUVKLS \$Q ([S  
\QDPLFV RI (QWUHSUHQHXULDO /HJDFLV LQ )DPLO\ )LUPV ,)(5

'H:LWW 5 / ,QGXVWU\ 6WXGLHV &RQIHUHQFH /DQG %DVHG ,  
2SWLRQDOLW\ DQG 'LYHUVLILFDWLRQ ,QGXVWU\ 6WXGLHV \$VVR  
&ROXPELD 8QLWHG 6WDWHV 0D\

'H:LWW 5 / \$XWKRU 3UHVHQWHU ,]]R \$ \$XWKRU \$QQXDO 0  
6XFFHVVLRQ 3ODQQLQJ \$FDGHPL RI 0DQDJHPHQW &DQDGD \$X  
-DPHV \$ \$XWKRU \*RQ]DOH]DV 3

'H:LWW 5 / \$FDGHP\ RI 0DQDJPHHQW \$QQXDO 0HHWLQJ 7ULSOH  
DQG 'LUHFWRUV 5ROHV LQ &UHDWLQJ 6WUDWHJLF ,VVXH 0RPHQ  
\$XJXVW

'H:LWW 5 / :RPHQ LQ %XVLQHVV &DUHHU 3DQHO 0HPEHU :RPH  
1HZ <RUN 8QLWHG 6WDWHV 6HSWHPEHU

'H:LWW 5 / %//( &RQIHUHQFH 5HMXYHQDWLQJ %XVLQHVV (GXFD  
&KDQJH ,WKDFD 1HZ <RUN 8QLWHG 6WDWHV -XO\

'H:LWW 5 / \$\$&6% \$QQXDO 0HHWLQJ 0DQGDWRU\ 1RWHERRNV  
<RUN 8QLWHG 6WDWHV \$SULO

'H:LWW 5 / 1\$&5\$ 1RUWK \$PHULFDQ &DVH 5HVHDUFK \$VVRFLDWI  
)DUJR 1\$&5\$ 6DQWD 5RVD &DOLIRUQLD 8QLWHG 6WDWHV 2F

'H:LWW 5 / 3HQQ 6WDWH V /LYH &DVH &RPSHWLWLRQ %ULQJL  
(GXFDWLRQ 6FKXOLF 6FKRR 0 RI %XVLQHVV <RUN 8QLYHUVLW

'H:LWW 5 / \$XWKRU 3UHVHQWHU \$FDGHP\ RI 0DQDJPHHQW \$Q  
)UDQFKLVRU 9V IUDQFKLVHH RZQHG XQLWV \$FDGHP\ RI 0DQDJ  
8QLWHG 6WDWHV \$XJXVW

'H:LWW 5 / \$FDGHP\ RI 0DQDJPHHQW 0HHWLQJV (QKDQFLQJ WH  
DGPLQLVWUDWRU\P SHUVSHFWLYH \$FDGHP\ RI 0DQDJPHHQW 6  
\$XJXVW

'H:LWW 5 / \*UDGXDWH 0DQDJPHHQW \$GPLVVLRLQV &RXQFLO \$QQX  
FODVVURRP /HVVRQV OHDUQHG \*UDGXDWH 0DQDJPHHQW \$GPL  
8QLWHG 6WDWHV -XQH

'H:LWW 5 / \$FDGHP\ RI 0DQDJPHHQW 0HHWLQJV \$ VWDNHKROGI  
SHUIRUPDQFH \$FDGHP\ RI 0DQDJPHHQW 3KRHQL[ \$UL]RQD 8Q

'H:LWW 5 / \$XWKRU 3UHVHQWHU %HUJK ' ' \$XWKRU 3UHV  
6RFLHW\ 0HHWLQJV \$OWHUQDWLYHV IRU H[FKDQJLQJ DVVHWV  
0DQDJPHHQW 6RFLHW\ 3KRHQL[ \$UL]RQD 8QLWHG 6WDWHV 1F

'H:LWW 5 / \$XWKRU 3UHVHQWHU 0ROOLFD . \$ \$XWKRU 3UHV  
3UHVHQWHU \$FDGHP\ RI 0DQDJPHHQW 0HHWLQJV )DLUQHVV W  
WR ZRUNIRUFH UHGXFWLRQV \$FDGHP\ RI 0DQDJPHHQW &LQFLG

'H:LWW 5 / \$XWKRU 3UHVHQWHU \$ 0 . \$XWKRU 3UHVHQW  
0HHWLQJV :KHQ RWKHUV UHWLUGH DUO\ 7KH LQIOXHQFH RI DJ  
UHWLUGH RQ UHPDLQLQJ HPSOR\HHV\P UHDFWLRQV \$FDGHP\ R  
8QLWHG 6WDWHV \$XJXVW

'H:LWW 5 / \$XWKRU 3UHVHQWHU \*HOHWNDQ\F] 0 \$XWKRU  
6RFLHW\ 0HHWLQJV \$Q HYROXWLRQDU\ SHUVSHFWLYH RQ WRS  
FKDOOHQJHV 6WUDWHJLF 0DQDJPHHQW 6RFLHW\ 3KRHQL[ \$UL

'H:LWW 5 / \$FDGHP\ RI 0DQDJPHHQW 0HHWLQJV ,QGXVWU\ DQG  
GRZQVL]LQJ DSSURDFK \$FDGHP\ RI 0DQDJPHHQW 9DQFRXYHU  
\$XJXVW

'H:LWW 5 / \$XWKRU 3UHVHQWHU 0ROOLFD . \$ \$XWKRU 3U  
\$QQXDO 0HHWLQJV :RPHQ PLQRULWLHV DQG GLVFUHSQDW VV  
WHDPV \$FDGHP\ RI 0DQDJPHHQW 'DOODV 7H[DV 8QLWHG 6WD

'H:LWW 5 / \$FDGHP\ RI 0DQDJPHHQW \$QQXDO 0HHWLQJV 7KH LI  
RUJDQL]DWLRQDO ERXQGDULHV \$FDGHP\ RI 0DQDJPHHQW \$WO  
\$XJXVW

'H:LWW 5 / \$XWKRU 3UHVHQWHU 7KRPDV - % \$XWKRU 3U  
3UHVHQWHU 6WUDWHJLF 0DQDJPHHQW 6RFLHW\ 0HHWLQJV 5H  
WRS PDQDJPHHQW WHDP FKDJH VWUDWHJLF FKDJH DQG ILUP  
DQDO\VLV 6WUDWHJLF 0DQDJPHHQW 6RFLHW\ 7RURQWR 2QWD

5HVHDUFK &XUUHQWO\ LQ 3URJUHV

)DPLO\ %XVLQHVV 6XVWDLQDELOLW\ 6WDWH \*DUGHQ 2Q \*RLQJ  
&DVH VWXG\ RI D WKLUG JHQHUDWLRQ IDPLO\ EXVLQHVV ZLWK D  
LQQRYDWLRQ DQG WKH UROH RI NH\ IDPLO\ DQG QRQ IDPLO\ PHF

7HUURULVP &RPSHWLWLYH 3RVLWLRQLQJ DQG /LDELOLW\ RI /RF  
)LUPV 2Q \*RLQJ  
:H FRQWULEXWH WR WKH OLWHUDWXUH RQ WHUURULVP\ HFRQF  
EHWZHHQ JHRJUDSKLF EDVHG SDWWHUQV RI WHUURULVP DQG W  
PDUNHW EHWZHHQ DQG :H H[WHQG WKH ORJLF RI OLDEL  
RI ORFDWLRQ GHULYHG IURP WKH FKRLFH RI JHRJUDSK\ LQGXV  
FRQFHSHW LQ WKH ILQH JUDLQHG VWXG\ RI H[LW :H EHJLQ ZLWK  
EHWZHHQ WKH JHRJUDSKLF HIIHFHWV PHDVXUHG DV SUR[LPLW\ D  
FRXQWU\ DQG FLW\ OHYHO DQG WKUHH H[LW SDWKZD\V IURP WK  
ILUPV \$V K\SRWKHVL]HG EDQNUXSFW\ LV PRUH OLNHO\ ZKHQ W  
VHYHUU \$FTXLVLWLRQV DQG JRLQJ SULYDWH RFFXU PRUH GXUL  
UHODWLRQVKLS LV VWDWLVWLFDO\ LQVLJQLILFDQW 7KH LQFO  
HQKDQFH WKH H[SODQDWLRQ RI EDQNUXSFW\ :H WKH H[DPLQH  
UHODWHG WR RXU EURDGHU QRWLRQ RI ORFDWLRQDO OLDELOLW  
ILQGLQJV VXJJHVW WKDW WHUURULVP RSHUDWHV ERWK DV D QD  
LQGXVWULHV DUH DIIHFHWG DQG DV D WHFKQRORJLFDO GLVFRQ  
GLVSURSRUWLRQDWHO\ DIIHFHWG

&RQWUDFWV \*UDQWV DQG 6SRQVRUHG 5HVHDUFK

(GXFDWLRQ 7UDLQLQJ \*UDQW

'H:LWW 5 / (QYLURQPHQWDO 3URJUDP ,,\* \*UDQW RQ 6XVWDLQDE  
7HDFKLQJ DQG /HDUQLQJ 7KH 8QLYHUVLW\ RI 9HUPRQW

\*UDQW

] \*XUGRQ 0 \$ 'H:LWW 5 / 7UL 1DWLRQDO &RPSHWHQFLHV \$FI  
6RFLDO 5HVSQRQVLELOLW\ 1RUWK \$PHULFDQ 0RELOLW\ 3URMHFW  
6HSWHPEHU \$XJXVW

'H:LWW 5 / 3ULQFLSDO ]] 6LQNXOD - &RQWULEXWRU <RXQG  
6SRQVRUHG E\ 6%\\$ )GHUDO 6HSWHPEHU \$XJXVW

%HUJH ' ' 3ULQFLSDO 'H:LWW 5 / &RQWULEXWRU &RUSRUD  
6SRQVRUHG E\ 6PHDO &ROOHJH RI %XVLQHVV 5HVHDUFK ,QLWLD

'H:LWW 5 / 3ULQFLSDO 7UHYLQR / . &RQWULEXWRU 0ROOL  
FKDQJH 6SRQVRUHG E\ \*HQHUDO 3XEOLF 8WLOLWLHV 2WKHU  
7KRPDV - % 3ULQFLSDO 'H:LWW 5 / &RQWULEXWRU PDQDJ  
LQGXVWU\ HIIHFVW RQ VWUDWHJLF DOLJQPHQW 6SRQVRUHG E\  
3ULYDWH  
'H:LWW 5 / 6WUDWHJLF SODQQLQJ IRU GRZQVL]LQJ 6SRQVRUH  
'HSDUWPHQW RI 'HIHQVH 2WKHU

\$ZDUGV DQG +RQRTUV

%HVW 3DSHU \$ZDUG ) (5& 0HHWLQJ -XQH  
 )2%, 6FKRODU \*UDQG 9DOOH\ )DPLO\ 2ZQHG %XVLQHV , QVWLWXW  
 7(\$&+, 1\*

7HDFKLQJ ([SHULHQFH

7KH 8QLYHUVLW\ RI 9HUPRQW  
 +&2/ 5HWXUQV )URP WKH /DQG FRXUVHV  
 +&2/ +RQRTUV &ROOHJH FRXUVH  
 %6\$' 7KH %XVLQHV (QWHUSULVH , FRXUVHV  
 %6\$' 7HDFKLQJ \$VVLVWDQWVKLS FRXUVHV  
 %6\$' 6WUDWHJ\ DQG &RPSHWLWLRQ FRXUVHV  
 %6\$' 'HY 7DOHqw IRU \*OREDO (FRQ FRXUVHV  
 %6\$' 67 /HDGLQJ 0DQDJLQJ WKH )DPLO\ &ORVHO\ +HOG %XV  
 %6\$' , QGHSHQGHQW 6WXG\ FRXUVHV  
 %6\$' 6WUDWHJLF 7KHPH &DSVWRQH \*% FRXUVHV  
 %6\$' \$67 6XVWDLQDEOH %XVLQHV FRXUVHV  
 %6\$' \$67 6WUDWHJ\ IRU &RUSRUDWH 6RFLDO 5HVSQVLELOLW\  
 %6\$' 6WUDWHJ\ DQG &RPSHWLWLRQ FRXUVHV

\$ZDUGV DQG +RQRTUV

([FHOOHQFH LQ 7HDFKLQJ 6PHDO &ROOHJH RI %XVLQHV \$GPLQLV  
8QLYHUVLW\

6PHDO &ROOHJH RI %XVLQHV \$GPLQLVWUDWLRQ 1RPLQHH IRU 8QI  
3HQHQV\OYDQLD 6WDWH 8QLYHUVLW\

+RQRUDU\ ,QGXFWHH 6PHDO &ROOHJH RI %XVLQHV \$GPLQLVWUDV  
8QLYHUVLW\

3URIHVVRU RI WKH <HDU 6PHDO &ROOHJH RI %XVLQHV \$GPLQLVW  
8QLYHUVLW\

)LQDOLVW %HVW 'LVVHUVWDWLRQ \$ZDUG \$FDGHP\ RI 0DQDJHPH

6(59,&(

6HUYL FH WR \$FDGHP LF &RPPXQLW\

&RPPLWWHH OHPEHU 7KHPH 5HYLHZ &RPPLWWHH )HEUXDU\

&RPPLWWHH &KDLU 6HDUFK &RPPLWWHH \$VVLVWDQW 3URIHVVRU  
3UHVHQW

&RPPLWWHH OHPEHU \$VvxUDQFH RI /HDUQLQJ -DQXDU\ 3UH

&RPPLWWHH OHPEHU )(&& 2UJDQL]LQJ &RPPLWWHH \$SULO 3

&RPPLWWHH &KDLU )DFXOW\ 6WDQGDUGV &RPPLWWHH 6HSWHPEH

/HG LQLWLDWLYH WR JHW %6\$' 68 GHVLJQDWHG 68 FRXUVH GHVL

)DFXOW\ OHDGHUVKLS ,QLWLDWHG 68 GHVLJQDWLRQ IRU %6\$' 0

\$GPLWWHG 6WXGHQW 9LVLW 'D\V \$SULO

)DFXOW\ \$GYLVRU &R 'HYHORSLQJ &DVH &RPSHWLWLRQ 7HDPV 6

&RPPLWWHH OHPEHU \*UDGXDWH 6WXGLHV &RPPLWWHH \$XJXVW

\$G +RF )6& FRPPLWWHH 537 UHYLHZ DQG XSGDW H )HEUXDU\

\$GPLWWHG 6WXGHQW 9LVLW 'D\V \$SULO

&RPPLWWHH &KDLU 2% +50 6HDUFK &RPPLWWHH -XO\ 1RYHP

&RPPLWWHH &KDLU &URVV 8QLYHUVLW\ (QWUHSUHQHXUVKLS &RO

&RPPLWWHH &KDLU 67(3 \$IILOLDWH 1RYHPEHU -XQH

\$GPLWWHG 6WXGHQW 9LVLW 'D\V \$SULO

FR HIRUW EHWZHHQ PH DQG -HQQLIHU )DWK \$GYLVLQJ 6XPPDU\

3URJUDP &RRUGLQDW RU &URVV 8QLYHUVLW\ (QWUHSUHQHXUVKLS

& R P P L W W . R & Q q

5 H S R U W \* H Q H U D W H G R Q 1 R Y H P E H U

3 D J H R I

5HSRUW \*HQHUDWHG RQ 1RYHPEHU

3DJH RI

5HYLHZHU \$G +RF 5HYLHZHU (QWUHSUHQHXUVKLS 7KHRU\ 3UDFW  
(GLWRULDO 5HYLHZ %RDUG OHPEHU \$0/( \$XJXVW 3UHVHQW  
&RPPLWWHH OHPEHU 67(3 7HDPP ,FHVL -XO\ 3UHVHQW  
5HYLHZHU \$G +RF 5HYLHZHU +XPDQ 5HVRXUFH 0DQDJHPHQW 'HF  
5HYLHZHU \$G +RF 5HYLHZHU &DVH 5HVHDUFK -RXUQDO 1RYHPEH  
(GLWRULDO 5HYLHZ %RDUG OHPEHU )DPLO\ %XVLQHV 5HYLHZ 2F  
5HYLHZHU \$G +RF 5HYLHZHU -RXUQDO RI 0DQDJHPHQW 6WXGLHV  
5HYLHZHU &RQIHUHQFH 3DSHU \$FDGHP\ RI 0DQDJHPHQW \$QQXDO  
([WHUQDO (YDOXDWRU IRU 537 'DOKRXVLH 8QLYHUVLW\ 2FWREHU  
5HYLHZHU \$G +RF 5HYLHZHU \$0/( -XO\ \$XJXVW  
5HYLHZHU &RQIHUHQFH 3DSHU \$FDGHP\ RI 0DQDJHPHQW \$QQXDO  
5HYLHZHU &RQIHUHQFH 3DSHU \$FDGHP\ RI 0DQDJHPHQW \$QQXDO  
&RPPLWWHH OHPEHU +DPOLQH 8QLYHUVLW\ 6FKRR O RI %XVLQHV  
\$SULO  
&RPPLWWHH OHPEHU )(5& -XO\ -XQH

5HYLHZHU &RQIHUHQFH 3DSHU \$FDGHP\ RI 0DQDJPHQW \$QQXDO  
+RVWHG 6FKRODU IURP &KLQD 6FKRODU ([FKDQJH -DQXDU\  
5HYLHZHU \$G +RF 5HYLHZHU -RXUQDO RI %XVLQHV ,QTXLU\  
5HYLHZHU \$G +RF 5HYLHZHU 2UJDQL]DWLRQDO 6FLHQFH  
5HYLHZHU \$G +RF 5HYLHZHU -RXUQDO RI %XVLQHV ,QTXLU\  
5HYLHZHU \$G +RF 5HYLHZHU -RXUQDO RI %XVLQHV 5HVHDUFK  
5HYLHZHU \$G +RF 5HYLHZHU 2UJDQL]DWLRQDO 6FLHQFH  
([WHUQDO 5HYLHZHU RI 0XOWL\$OH \$FDGHPLF GHSDUWPHQWV 8QLY  
)ORULGD -DQXDU\ )HEUXDU\  
5HYLHZHU \$G +RF 5HYLHZHU -RXUQDO RI %XVLQHV ,QTXLU\  
%RDUG RI 'LUHFWRUV 3URIHVVLRQDO \$VVRFLDWLRQ %HWD \*DPPD  
5HYLHZHU \$G +RF 5HYLHZHU 2UJDQL]DWLRQDO 6FLHQFH  
5HYLHZHU \$G +RF 5HYLHZHU -RXUQDO RI 0DQDJPHQW 6WXGLHV  
5HYLHZHU \$G +RF 5HYLHZHU ,QGXVWULDO 5HODWLRQV  
5HYLHZHU \$G +RF 5HYLHZHU 2UJDQL]DWLRQ 6FLHQFH  
5HYLHZHU \$G +RF 5HYLHZHU \$FDGHP\ RI 0DQDJPHQW  
5HYLHZHU \$G +RF 5HYLHZHU -RXUQDO RI 0DQDJPHQW 6WXGLHV  
5HYLHZHU \$G +RF 5HYLHZHU 7KXQGHUELUG ,QWHUQDWLRQDO %XV  
5HYLHZHU \$G +RF 5HYLHZHU \$FDGHP\ RI 0DQDJPHQW -RXUQDO  
0HPEHU \*RYHUQRU V :RUNJURXS RQ \*RYHUQPHQW (IILFLHQF\ 3\$\*(  
5HYLHZHU \$G +RF 5HYLHZHU \$GPLQLVWUDWLYH 6FLHQFH 4XDUWH  
&RPPLWWHH 0HPEHU \$FDGHP\ RI 0DQDJPHQW  
(GLWRULDO 5HYLHZ %RDUG 0HPEHU -RXUQDO RI 0DQDJPHQW (GL  
3XEOLF 6HUYLFH  
%RDUG 0HPEHU \*UHDWHU %XUOLQJWRQ ,QGXVWULDO &RUSRUDWL

5HSRUW \*HQHUDWHG RQ 1RYHPEHU f f f f f f Ff

5HSRUW \*HQHUD3PEJH5HSRUW \*HQHUD 5HSRUW \*HQHUD 15HSRUW \*HQHUDDD fDfOx