

Di hnYb`a]h`@Y]W\ h][_Y]h. `K]Y`H]_Hc_`X]Y
F Y]b][i b[gk Y`h`j Yf`ÀbXYfhY

Ghi hh[Ufh. / ei ch/7`YUbi Zi YbWf/ ei ch/hY]`Yb`Ui ZH]_Hc_
]bbcj Uhj] Y`Di hn!`i bX`<Ui g\U`hgh]ddgž`X]Y`]a a Yf`a Y\ f
5b\`Àb[Yf`[Yk]bbYb"

Ghi hh[Ufh. ` ð`XYb`Y`hnYb` ð\ fYb` \Uh`g]W\`Y]bY`bYi Y`5fhj`cb
ðhYfbYh!DYfg`Òb`]W\`_Y]hYb` \YfUi`g[YV]`XYhž`X]Y`X]Y`U`hÀ[`]W\`Yb
5i Z[UVYb`XYg`<Ui g\U`hg`Ui`g`Y]bYf`Zf]gW\`Yb`DYfgdY`_h]j`Y
df`ÀgYbh]YfYb`"A]h`Y]bYa`Ybcfa`Yb`5bgh]Y[`j`cb`J]XYcg`ni
F Y]b][i b[gh]ddgž`]bgVYgcbXYfY`Ui Z`D`UhhZcfa`Yb`k]Y`H]_Hc_ž
YfZfYi`Yb`g]W\`X]Y`gc[YbUbbhYb` 7`YUbi Zi YbWf` [fc»Yf
6Y`]YVh\Y]h`8]YgY` ðZi`YbWf`nY][Yb`]b`_i`fnYb`7`]dgž`k]Y`a`Ub`XUg
Ni \Ui`gY`i`b`_ca`d`]n]Yfhi`bX`YZZY`_h]j`gUi`VYf`\U`hYb`_Ubb"

8]Y`&) !`À\ f][Y`@YU`XY`6fi]`bž`X]Y`]\fYb`H]_Hc_!5W\ci`bh
4 a`m`WYUbbhc`_VYhfY]Vhž`\Uh`g]W\`]b`X]YgYf`B]gW\`Y`dcg]h]cb]Yfhi`bX
j`YfnY]W\`bYh`a]h`Yfk`Y]Y`ØVYf`%\$`\$`\$`\$`:`c`ck`Yf`" ðfY`J]XYcg`g]bX
b]W\`h`bi`fi`bhYf\U`hgUa`ž`gcbXYfb`a`ch]j]YfYb`gY\`f`j]Y`Y
A`YbgW\`Yb`ž`g]W\`a]h`XYa`Di`hnYb`Ui`gY]bUbXYfni`gY`hnYb`ž`gY`Vgh
k`Ybb`g]Y`j]Y`Y`Y]W\`h`b]W\`h`X]Y`[f`Ò»hY`@`gh`XUni` \UVYb`"8Y`6fi]`b
[]Vh]b`]\fYb`7`]dg`\Ai`Z[`b`Øh`]W\`Y`H]ddgž`X]Y`XUg`Di`hnYb
Y]bZUW\`Yf`i`bX`gc[Uf`gdU»][Yf`[YghU`hYb"

DfcZ]h`Ui`g`XYf`Di`hn`Y]XYbgW\`UZh

ð`Y]bYf`K`Y`hž`]b`XYf`XYf`9]bZi`gg`j`cb`gc`n]U`Yb`A`YX]Yb`b]W\`h`ni
i`bhYfgW\`À`hnYb`]ghž`\Uh`g]W\`XY`6fi]`bg`@Y]XYbgW\`UZh`Z`Øf`XUg
Di`hnYb`ni`Y]bYa` `i`_fUh]j`Yb`;`YgW\`À`Zi`Yb`hk]W\`Y`h`"Dfc`J]XYc
]bj`Ygh]Yfh`g]Y`fi`bX`UW\`h`V]g`nY`\b`Ghi`bXYb`ž`k`Ug`Z`Øf`g]Y`Y]bY
VYUW\`h]W\`Y`6Y`c`\bi`b[`]b`j]YfghY`][Yf`<`Ò`Y`VYXYi`hYh`"HÀ[`]W\`

Yf\À'h'g]Y'nk Y]'V]g'XfY]'5bZfU[Yb'j cb'ì bhYfbY\à Ybž'X]Y'Ub
?ccdYfUh]cbYb'ì]bhYfYgg]Yfh'g]bX" Ìf'Y\ f[Y]n][Yf'D'Ub'g]Y\h'j cfž
Y][YbY'F Y]b][i b[gdfcXi _hY'Ui Z'XYb'A Uf_h'ni 'Vf]b[Yb"

8]Y'Dc di 'Uf]hÀ'h']\fYf'J]XYcg'nY][hž'XUgg'\Yi hni hU[Y'j]Y'Y
A YbgWXYb'XUni 'hYbX]YfYbž'b]W'h'a Y\ f']\fY'; fc» a ØhYf'bUW
VYk À\fhYb'<Ui g\U'hghf]W_g'ni 'ZfU[Ybž'gcbXYfb''YVYf'ja ' ðhYfbYh
bUW '@Øgi b[Yb'gi WXYb" DfcZYggcf'5fbY'K YghYfa Ubb'j cb'XYf
 ðhYfbUh]cbU'GWcc'cZ'A UbU[Ya YbhYf_Àfhž'XUgg'X]YgY
9bhk]W_ì b['nY][hž'k]Y'X]Y'; Yk c\ b\Y]hYb'XYf'A YbgWXYb'g]W
Xi fW'X]Y'gcn]U'Yb'A YX]Yb'j YfÀbXYfh'\UVYb"

8Y'6fi]b'XYa cbghf]Yfh'j]b'ì]fYb'J]XYcg'dfU_h]gWXY'H]ddgž'k]Y'ni a
6Y]gd]Y'X]Y'J Yfk YbXi b['j cb'K Y]WgdØYfž'i a 'GhUi V'ni
j Yf\]bXYfbž'cXYf'X]Y'5bk YbXi b['j cb'G\Ua dcc'ni a
: YbghYfdi hnYb'ì [Ubnc\ bY'GhfY]ZYb"5''X]Yg'nY][hž'XUgg'j]b'XYf
X][]hU'Yb'Y'fU'bYi Y'5bgÀhnY'ì bX'A Yh\cXYb'9]bni ['j]b'XUg
hfUX]h]cbY''Y'Di hnYb'\U'hYb"

K]fhgW UZh']WXY'5gdY_hY'ì bX'8mbUa]_Yb

8]Y'ì bhYfbY\à Yb'Yf_YbbYb'gW.bY''ž'XUgg'X]YgY'bYi Yb
HfYbXgYhYf'j]b'XYf'K Y'h'XYf'gcn]U'Yb'A YX]Yb'Y]b' [fc» Yg'DchYbn]U'
V]YhYb"8Yf'F Y]b][i b[ggdYn]U'gh'J]YXU'\Uh'&\$&('gY]bY' ðZi YbWf!
?Ua dU[bYb'j YfXcddY'h'ì bX'd'Ubhž'X]YgY'Zcfhni gYhnYb"5i W
?ÀfWYf'ì bX'@Y]Z]Y]h'dfcZ]h]YfYb'j cb'XYb'?ccdYfUh]cbYb'a]h
7'YUbZi YbWfb'ì bX'j YfnY]W.bYb'Y]bYb'5bgh]Y ['Ub
Ni gUa a YbUfVY]h"

8]Y'J YfV]bXi b['nk]gWXYb'XYb'F Y]b][i b[gi bhYfbY\à Yb'ì bX'XYb
gcn]U'Yb'A YX]Yb'j]ghYfk]YgYb'ì]_fUh]j 'ì bX'nY][hž'k]Y'gY\ f'X]Y
K YfVYghfUhY []Yb'g]W'UbdUggYb'a ØggYbž'ì a 'XYb'NY]h[Y]gh'ni
hfYZYb"8U'ja a Yf'a Y\ f'A YbgWXYb'J]XYcg'ni 'F Y]b][i b[gh]ddg
_cbgi a]YfYbž'V]YhYb'g]W'ZØf'A Uf_Yb'bYi Y'A Ò['j]W_X]YhYbž'g]W'j]b
X]YgYa 'k UW.gYbXYb'A Uf_h'ni 'YhUV'j]YfYb"

8cW' b]W'h'U''Yg'j]gh'; c'Xž'k Ug['Àbnh"K À\ fYbX'X]YgY'Di hnj]XYcg
Y]bY'E i Y''Y'XYf' ðgd]fUh]cb'gY]b'_ØbbYbž'k Y]gYb'9I dYfhYb'Ui Z

dchYbn]Y`Y`bY[Uh]j Y`5i gk]f_i b[Yb`\\b"DgmWxc`c[]b`6f][]hhY
6OgYb_cdZ'a UW h'Ui Z'X]Y'; YZU\\f'Ui Za Yf_gUa ž'XUgg`XYf
Y]bgY]h][Y`J Yf[`Y]W`a]h`Y]bYa `dYfZY_h]cb]gh]gW`Yb`@YVYbggh]`]b
gcn]U`Yb`A YX]Yb`ni` : fi ghfUh]cb`ZØ\\fYb`_Ubb``A UbW`a U`]gh`XUg
6YXØfZb]g`bUW`Y]bYf`_]b]gW`Yb`GUi VYf_Y]hi`bbØh][`i`bX
i`bYffY]W`VUf"

Ni`gÅh`]W`h`Ya Uh]g]Yfh`6OgYb_cdZ`XUgg`X]Y`J]Y`nU`\\`j`cb
Di`hnj]XYcgž`X]Y`cZi]cb` : fUi`Yb`YfghY`h`k`YfXYbž`U`h`Y`F`c`Y`bV]`XYf
j`YfghÅ`f`_Yb`_ØbbhY``æ` ; Y[YbgUhn`XUni`nY][h`XYf`?`cW`VYfY]W`
Y]bY`XYi`h]W`Y`J`Yf`U[Yfi`b[ž`XU`\\]Yf`]a`a`Yf`a`Y`f`A`ÅbbYf`U_h]j
\\fY`?`cW`_ØbghY`]a` `æhYfbYh`dfÅgYb]YfYb"

9]b`gdUbbYbXYf`HfYbX`a`]h`\\`UbXY`bXYb 5_hYi`fYb

8]Y`K`Y`h`XYf`7`YUbZi`YbW`f`nY][hž`XUgg`Di`hnYb`b]W`h`bi`f`Y]bY
`Ågh][Y`DZ]W`h]ghž`gcbXYfb`Ui`W`]b`XYb`gcn]U`Yb`BYhnk`Yf`_Yb
i`bhYf`\\`U`hgUa` `i`bX`gdUbbYbX`[YghU`h`h`k`YfXYb`_Ubb``8]Y
XmbUa`]gW`Y`æhYfU_h]cb`nk`]gW`Yb`æZi`YbW`fbž`XYfYb` : c`ck`Yfb
i`bX`XYb`i`bhYfbY`a`Yb`nY][hž`k`]Y`g]W`?`cbgi`a`j`Yf`\\`U`h`Yb`i`bX
K`YfVi`b[`k`Y]hYfYbhk`]W`_Y`b``8]YgYf`HfYbX`]gh`Y]b`HY`]`XYg
ØVYf[fY]ZYbXYb`D`Åbca`Ybgž`XUg`i`bgYfY`a`cXYfbY`X][]hU`Y`?`i`h`i`f
dfÅ[h"

9]b`6`]W`_`Ui`Z`X]Y`Dc`di``Uf]hÅ`h`j`cb 7`YUbZi`YbW`fb

8]Y`9fZc`[gk`Y`Y`j`cb`7`YUbZi`YbW`fb`]gh`b]W`h`bi`f`Ui`Z
dYfgØb`]W`Yb`5bgdcfb`ni`fØW`ni`ZØ\\fYbž`gcbXYfb`Ui`W`Ui`Z`Y]bY
ni`bY`a`YbX`[YghfYgghY` ; YgY`gW`UZhž`X]Y`bUW`gW`bY`Yb
@Øgi`b[Yb`ZØf`U`hÅ[`]W`Y`DfcV`Ya`Y`gi`W`h``8]Y`j`YfghÅ`f`_h`Y`Bi`hni`b[
j`cb`gcn]U`Yb`A`YX]Yb`\\`Uh`XYb`Ni`[Ub[`ni` `æZcfa`Uh]cbYb
a`U`[YV`]W`j`YfÅ`bXYfh``<Ui`g`U`h`g!`i`bX`F`Y]b][i`b[gh]ddgž`X]Y
ZfØ`Yf`c`Zi]b`dYfgØb`]W`Yb`æhYfU_h]cbYb`k`Y]hYf[Y[YVYb`k`i`fXYbž
g]bX`bi`b`Ui`Z`D`UhhZcfa`Yb`k`]Y`H]_Hc`_`i`bX`æghU[fUa` `Y]W`h
j`YfZØ[VUf``8]YgY`5fh`XYf`K`]ggYbgj`Yfa`]h`i`b[ž`X]Y`U`g` dYYf!hc!

dYYf` []hž`Yf`Ui Vh`Yg`Bi hnYfbž`gWk`bY`5b`hk`cfhYb`Ui Z`gdYn]Z]gWk`Y
: fU[Yb`ni`Z]bXYb"

Ghi`X]Yb`nY][Ybž`XUgg`j`]gi`Y`Y`ϕ`U`hY`Ui Z`gcn]U`Yb`A`YX]Yb`Y]bY
k`Y]hfY]Wk`YbXY`K`]f`_i`b[`UVYb"@Ui`h`Y]bYf`I`a`ZfU[Y`j`cb`GhUh]ghU
Ui`g`XYa` `U`f`&\$&'` [UVYb`Yhk`U`+\$`i` `XYf`6YzfU[hYb`Ubž`XUgg`g]Y
Xi`fWk`gcn]U`Y`A`YX]Yb`]bgd]f]Yfh`k`UfYbž`bYi`Y`DfcXi`_hY
Ui`gni`dfcV]YfYb`cXYf`Y`bXYfi`b[Yb`]b`]\fYa` `@YVYbggh`
j`cfni`bY`a`Yb`"8Ug`F`Ygi`hUh`8]Y`6Y`YVh`Y]hj`cb`7`YUbZi`YbWf`b
_`ÖbbhY`Ui`Wk`X]Y`9bhgWk`Y]Xi`b[`j`]Y`Yf`J`YfVfUi`Wk`Yf`VYY]bZi`ggYbž
bYi`Y`F`Y]b][i`b[ga`]hY`ni`_`Ui`Z`b`cXYf`]\fY`F`Y]b][i`b[gfc`i`h]bY`ni
ØVYfXYb`_Yb`"I`bhYfbY`a`Yb`UVYb`X]YgY`HfYbXg`Yf`_Ubb`hi`bX
]bj`Ygh]YfYb`Yf`YV`]Wk`]b`ϕ`Zi`YbWf`!A`Uf`_Yh]b[ž`i`a` `]\fY`DfcXi`_hY
Y]bYa` `VfY]hYb`Di`V`]_i`a` `j`cfni`ghY`Yb"

8]Y`F`c`Y`XYf`I`bhYfbY`a`Yb`]a` `ϕ`Zi`YbWf`!
A`Uf`_Yh]b[

8]Y`Ni`gUa`a`YbUfVY]hj`cb`i`bhYfbY`a`Yb`a`]h`7`YUbZi`YbWf`b
Yf`ÖZb`Yh`bYi`Y`A`Uf`_Yh]b[ghfUhY[]Ybž`X]Y`Ui`Z`5i`h`Ybh]n]h`A`hi`bX
J`YfhfUi`Yb`VUg]YfYb"@Ui`h`Y]bYf`Ghi`X]Y`j`cb`ϕ`Zi`YbWf`A`Uf`_Yh]b[
<i`V`Ui`g`XYa` `U`f`&\$&`Z]bXYb`*` `i` `XYf`6YzfU[hYb`Yg
[`Ui`Vk`ØfX][Yfž`DfcXi`_hVYk`Yfhi`b[Yb`]cb`ϕ`Zi`YbWf`b`ni
j`YfhfUi`Yb`U`g`j`cb`hfUX]h]cbY`Yb`K`YfVi`b["8]Yg`nY][hž`XUgg
I`bhYfbY`a`Ybž`X]Y`g]Wk`a`]h`ϕ`Zi`YbWf`b`ni`gUa`a`YbUfVY]hYbž`Y]bY
X]fY`_hYfY`i`bX`YZZ`_h]j`YfY`J`YfV]bXi`b[`ni` `]\fYf`N]Y`[fi`ddY
`YfghY`Yb`_`ÖbbYb"

B]Wk`h`bi`f`[fc»Y`A`Uf`_Yb`dfcZ]h]YfYb`j`cb`X]YgYa` `HfYbX`"?`Y]bYfY
I`bhYfbY`a`Ybž`X]Y`gdYn]Y`Y`F`Y]b][i`b[gdfcXi`_hY`YfghY`Ybž
Yf`_YbbYb`YVYbZU`g`XYb`K`Yfh`XYf`Ni`gUa`a`YbUfVY]h`a`]h
7`YUbZi`YbWf`bž`i`a`]g]Wk`Ui`Z`XYa` `A`Uf`_h`ni` `dcg]h]cb]YfYb`"ϕ`XYa
g]Y`g]Wk`]b`XYb`gcn]U`Yb`A`YX]Yb`dcg]h]cb]YfYbž`_`ÖbbYb`g]Y`Y]b
↑`b[Ygž`hYWk`b]_UZZ]bYg`Di`V`]_i`a` `YffY]Wk`Ybž`XUg`hfYbXVYk`i`ggh]gh
i`bX`Ui`Z`9a`dZY`i`b[Yb`]cb`ϕ`Zi`YbWf`b`fYU[]Yfh"

; YgY`gWk`UZh`]Wk`Y`a`d`]_Uh]cbYb`i`bX

< YfUi gZc fXYfi b [Yb

8]Y'5bn]Y\i b[g_fUZhij cb'Di hnj]XYcg']gh'b]W\h'ZfY]j cb'DfcV`Ya Yb"
9]b'\Äi Z['k]YXYf_Y\fybXYg'H\Ya U']gh'X]Y': fU[Y'XYf'gcn]U`Yb
J YfUbnk cfhi b['j cb' ðZi YbWfb"J]Y`Y`Ni gW\Ui Yf' _ÖbbhYb
i bfYU`]gh]gW\Y`9fk Ufhi b[Yb`Ub`GUi VYf_Y]hi bX`CfXbi b[
Ybhk]W_Y`bž`k Ug`ni `Y]bYa `gW\`YW\hYb`GY`VghV]`X`ZØ\fyb`_Ubb"
@Ui h'XYf`DgmW\c`c []b`6f][]hY`6ÖgYb_cdZ`_ÖbbhY`XYf`9]bZi gg
gc`W\Yf` ð\U`hY`XUg'; YZØ\`XYf`I bni `Äb[`]W\ _Y]hij YfghÄf`Ybž
VYgcbXYfg`VY]`† b[Yb': fUi Ybž`X]Y`g]W\`a]h`XYb`cZi]XYU`]g]YfhYb
8 UfghY``i b[Yb`j Yf[`Y]W\Yb"

8]YgY`DfcV`Ya Uh]_j YfXYi h`]W\h`Ui W\ž`k]Y`gcn]U`Y`A YX]Yb`U`g
8 cddY`!YX[YX`gk cfX`Zi b[]YfYb`_ÖbbYb"K Ä\fybX`g]Y`X]Y
A ch]j Uh]cb`ni a `5i ZfÄi a Yb`i bX`Di hnYb`ZØfXYfbž`_ÖbbYb`g]Y`Ui W\
Y]bY`?i `hi f`XYg`J Yf[`Y]W\g`i bX`GY`Vghnk Y]ZY`g`gW\Øfyb"8Yf
GW`ØggY``_ÖbbhY`XUf]b``]Y[Ybž`Y]b`Ui g[Yk c[YbYg`6]`X`j cb`5``hU[
i bX`DYfZY_h]cb`ni `dfÄgYbh]YfYb`i bX`5i Zfi ZY`ni `a Y\f
5i h\Ybh]n]hÄh`]b`XYf`7cbhYbh]DfcXi _h]cb`ni `i bhYfghØhnYb"

8YhU]`g

6Ygi W\Yb`G]Y`i bg`Ui Z.`b!U["XY